

**Notice of RCRA Permit Modification
in Accordance with 20 NMAC 4.1.900
(40 CFR Part 270)**

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

November 10, 1999

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Consistent with requirements of 20 New Mexico Administrative Code (NMAC) 4.1.900 (hereafter referred to as Part 270 or Section 270.XX), the U.S. Department of Energy, Carlsbad Area Office (CAO) is submitting to the New Mexico Environment Department (NMED) a notice of class 1 modifications to the Resource Conservation and Recovery Act (RCRA) operating permit (#NM4890139088-TSDF) for the Waste Isolation Pilot Plant (WIPP). Specifically, this information is provided to comply with the requirements of Section 270.42(a)(i).

Requested modifications are listed in Table 1. Listed information includes a reference to the applicable section of the permit, a brief description of the item, and the class of the item, as identified in Appendix I to Section 270.42. The relevant permit modification category, as also identified in Appendix I, is provided as well. More complete descriptions of the class 1 modifications are provided in Attachment 1.

All of the identified changes are minor in nature and serve to keep the permit current with facility operations. The changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit. This submittal does not contain class 1 modifications requiring approval prior to implementation.

Table 1. Class 1 RCRA Permit Modification

No.	Affected Permit Section	Item	Category	Attachment 1 Page #
1	Part A	Replace Part A in the permit with the current Part A.	A.1	A-1
2	Module II	Insert text clarifying the use of SW-846 methods for waste characterization.	B.1.a	A-2
3	Module VII	Revise text to make consistent with wording of regulatory requirements.	B.1.a	A-3
4	B	Change to title for responsible QA individual.	A.1	A-4
5	B1	Changes to Attachment B1 that provide clarifications regarding waste characterization.	A.1 A.3	A-6
6	B2	Change to remove reference to QAPP and provide references to other sections.	A.1	A-16
7	B3	Changes to Attachment B3 that provide clarifications regarding the quality assurance objectives and data validations techniques for waste characterization sampling and analytical methods.	A.1	A-17
8	B4	Change to Attachment B4 that provides correction of a typographical error.	A.1	A-23
9	B6	Change to Table B1 to make it consistent with text of permit.	A.1	A-24
10	D	Editorial and administrative changes to Attachment D to reflect actual practices.	A.1	A-25
11	D, D1, M2	Change wording from “Brudi Lift Attachment” to “Push-Pull Attachment”.	A.1	A-27
12	D1	Administrative and editorial changes to checklists to reflect most current checklists.	A.1	A-36
13	Table D-1	Make minor changes in Table D-1 to reflect most current inspection schedules.	A.1	A-38
14	E	Editorial change to reflect current equipment usage and firefighting procedures.	A.1	A-41
15	H1	Revise job descriptions to be current with actual descriptions.	B.5.b	A-43
16	H2	Revise course descriptions and qualification cards to be current with actual descriptions.	B.5.b	A-48
17	H2	Add position: “Sampling Team Assistant” to allow for additional support in non-emergency response.	B.5.b	A-59
18	L	Revise language to allow upgrading of equipment.	A.3	A-66
19	M2	Change to clarify the manner in which space over the drums in rooms is maintained.	A.1	A-68

No.	Affected Permit Section	Item	Category	Attachment 1 Page #
20	P	Revise Attachment P to incorporate current revisions of specified documents.	A.1	A-69

Attachment 1

Descriptions of RCRA Permit Modification

Item - 1

Description:

Replace previously submitted Part A with revised Part A.

Basis:

Part A has been revised and the State has requested that a Class 1 permit modification be submitted to include the revised Part A. The primary Part A revision is a new CAO General Manager.

Discussion:

The item above is a Class 1 permit modification under Section 270.42, Appendix I, A.1. This item is most appropriately classified as an administrative and informational change. It is a minor change to the permit necessary to keep it current with facility operations. The item neither substantially alters the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Attachments:

Attachment 1-A - Revised Part A

Item - 2

Description:

Revise text in Module II.C.1.b to clarify the use of SW-846 methods for waste characterization. See redline of final permit below.

Basis:

This change provides for a clear understanding of the use of SW-846 and future updates of SW-846. This change makes it clear that the future updates of SW-846 will be incorporated into the permit by reference and that sites will be allowed to use any future SW-846 methods once they have demonstrated that any new methods will provide at least equivalent results.

Discussion:

The item above is a Class 1 permit modification under Section 270.42, Appendix I, A.4. This item is most appropriately classified as a change to conform to agency guidance. It is a minor change to the permit necessary to keep it current with facility operations. The item neither substantially alters the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Module II, page 16

Waste characterization sampling and analytical methods - the Permittees shall require that generator/storage sites comply with the method requirements, quality control, equipment testing, inspection, maintenance, and equipment calibration and frequency standards for the procedures specified in Permit Attachment B1 (Waste Characterization Sampling Methods). For all analytical methods for waste analysis not otherwise specified in Permit Attachment B1, the Permittees shall require the generator/storage sites to use "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*", EPA Publication SW-846. Updates to EPA Publication SW-846 shall be incorporated into this permit by reference. Sites may use these new or revised methods once they have demonstrated that the results from the new methods will be at least equivalent to the results from the currently used methods.

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Item - 3

Description:

Revise the text in Module VII.B.4, Section 4.d, page VII-6 to make it consistent with the requirements of 20 NMAC 4.1.800 (incorporating 40 CFR 268.7, Waste Analysis and Record keeping) pertaining to determining the status of waste relative to land disposal restrictions.

Basis:

20 NMAC 4.1.800 (incorporating 40 CFR 268.7, Waste Analysis and Record keeping, 1996) requires generators to determine if their waste is restricted from land disposal. The regulations allow this determination to be made in either of two ways: by testing or by knowledge of the waste generating process. The change requested to the permit is to make the permit consistent with the generator standards in 20 NMAC 4.1.800 (incorporating 40 CFR 268.7). The WIPP implements 40 CFR 268.7 requirements through site plans and procedures which are designed to provide sufficient knowledge to make this determination. Sampling will be implemented when procedures do not provide the required level of confidence in the knowledge of the waste.

Discussion:

The item above is a Class 1 permit modification under Section 270.42, Appendix I, B.1.a. This item is most appropriately classified as a modification to conform with agency guidance. It is a minor change to the permit necessary to keep it current with facility operations. The items neither substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Module VII.B.4, Section 4. d , Page VII-7

Except as exempted by Section 9(a)(1) in the WIPP LWA, the Permittees shall ~~perform a waste analysis at least annually or when a process changes, to demonstrate that~~ determine whether any hazardous waste generated at the facility ~~meets applicable treatment standards~~ is restricted from land disposal and complete the notifications to the disposal facility where the waste will be shipped in accordance with 20 NMAC 4.1.800 (incorporating 40 CFR 268.7). Results shall be maintained in the operating record.

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Item - 4

Description:

- A. Delete the word “Data” from the title “Generator/Storage Site Data QA Officer” in section B-4a(5) on page 22. See strikeout of final permit below.
- B. Change text in Section B-1d from “generator/storage site waste project manager” to “site project manager”. See redline/strikeout of final permit below.
- C. Change reference in text on page B-18 from §264.601(b) to (c). See redline/strikeout of final permit below.

Basis:

- A. This change provides the correct title for the responsible individual. No changes have been made to job responsibilities.
- B. This change makes a title consistent throughout the permit. No changes have been made to job responsibilities.
- C. This change corrects a typographical error.

Discussion:

The items above are Class 1 permit modifications under Section 270.42, Appendix I, A.1. The items are most appropriately classified as administrative and informational changes. They are minor changes to the permit necessary to keep it current with facility operations. The changes neither substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

A. Section B, page B-22

The first level of data verification by the generator/storage site will confirm that the waste characterization data are properly reported for the characterized TRU mixed waste containers that will be shipped to the WIPP. Data review, validation, and verification procedures used by the generator/storage sites are required to ensure that 100 percent of the data reported has received an independent technical review to assure that data generation and reduction were conducted in a technically correct manner, calculations have been verified correct, and all variances from accepted analytical methods (appropriate to the waste type being analyzed) have been documented and approved. Batch data reports will be reviewed by generator/storage sites for completeness to verify that they include field sampling records, raw analytical data, calculation records, COC documentation, calibration records, QA sample results, and that sample holding times and preservation methods were met or exceptions documented. Completed batch data reports shall be signed by the technical supervisor and a QA reviewer. At the Project level of verification (Level 2), 100 percent of the data summary packages and waste stream characterization summary package reports are subject to review to ensure that data useability and DQO criteria are met, that all required reviews have been performed and documented, that review checklists are complete, and

that all data are correctly reported (refer to Permit Attachment B3). At the second level of verification the Generator/Storage Site Project Manager and the Generator/Storage Site ~~Data~~ QA Officer will also ensure that a repeat of this review is performed for at least one randomly chosen container quarterly. Finally, if a batch data report is requested by the Permittees, a check for the required batch data report elements will be performed by the Permittees as the third level of verification to assure that batch data reports are complete. Figure B-4 shows the components of each level of data verification. Data verification and requirements are discussed in more detail in Permit Attachment B3.

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B. Section B, page B-8

- C Waste Stream Profile Form Certification statement signed by the ~~generator/storage site~~
 ~~waste~~ project manager.

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C. Section B, page B-18

- C Headspace-Gas Sampling and Analysis
 - To identify VOCs and quantify the concentrations of VOC constituents in the total waste inventory to ensure compliance with the environmental performance standards of 20 NMAC 4.1.500 (incorporating 40 CFR, §264.601(bc)), and to confirm hazardous waste identification by acceptable knowledge.

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Item - 5

Description:

- A. Add a sentence to the permit to allow for the taking of equipment blanks on a purchased batch basis. See redline of final permit below.
- B. Remove the requirement in section B1-1a(1) that sample canisters be “welded” vessels. See strikeout of final permit below.
- C. Add reference to footnote f on line 8 of Table B1-4 on page B1-36. See redline of final permit below.
- D. Revise language on lines 19-22 of page B1-5 to allow a temperature range from 18^NC to 50^NC. See redline/strikeout of final permit below.
- E. Revise language in Section B1-1a(1) on page B1-2 to allow the use of a steel punch. See strikeout of final permit below.
- F. Revise language in Section B1-1a(3)(i) on page B1-6 to change “i.e.” to “e.g.”. See redline/strikeout of final permit below.
- G. Delete sentence beginning “Holding times . . .” on page B1-8 line 25. See strikeout of final permit below.
- H. Revise text on page B1-9 under section B1-1b(1) to read “field” rather than “equipment”. See redline/strikeout of final permit below.
- I. Replace “and” on page B1-9 with “or”. See strikeout of final permit below.
- J. Modify sentence beginning “As an additional QA check . . .” on page B1-23. See strikeout of final permit below.
- K. Remove the word “core” on page B3-13. See redline strikeout of final permit below.
- L. Replace the word “one” with the word “core” on page B1-15. See redline/strikeout of final permit below.
- M. Revise text in Section B1-2b(1) to be consistent with section B3-3 for core collection frequency. See redline/strikeout of final permit below.
- N. Revise text in Section B1-4, fifth bullet, to read sample containers rather than waste containers. See redline/strikeout of final permit below.
- O. Add a parenthetical phrase to Section B1-2b(2) explaining the meaning of “fully assembled.” Also, revise associated text in Section B1-2b(3) to be consistent. See redline of final permit below.
- P. Revise text in Section B1-1a(1) to clarify use of gauge. See redline/strikeout of final permit below.

- Q. Change the word “singing” to “signing” in Section B1-5. See redline/strikeout of final permit below.
- R. Delete the word shall in Section B1-1a(3)(ii) first paragraph. See strikeout of final permit below.
- S. Strike the words “and canister pressure gauges” in section B1-1d. See strikeout of final permit below.

Basis:

- A. There is no need to clean sampling equipment that has been purchased sterile and is sealed in protective packaging. Manufacturers certify that equipment is not contaminated. The taking of equipment blanks on a purchased batch basis will provide sufficient information to determine if the equipment has been contaminated.
- B. The requirement that sample canisters be welded has no bearing on the integrity of the sampling vessel once the vessel has been demonstrated leak free. The non-welded canister is the functional equivalent of the welded canister specified.
- C. A reference to footnote f from the bottom of Table B1-4 was omitted from the actual table. The footnote reference should be added to line 8 after “(PCBs)”.
- D. The range specified in the permit does not give units or clearly specify its use. This change allows for a range that is sufficient to cover the ambient temperatures expected at the sampling locations.
- E. An appropriate punch is one that can be passivated to minimize the potential for cross-contamination of the sample. “Sparkless” metals cannot meet this cleanliness criterion; therefore steel punches will be acceptable.
- F. This change corrects a typographical error.
- G. Holding times have been deleted from Table B1-1; therefore, the hold times for headspace gas samples are not specified.
- H. This change corrects a typographical error.
- I. This change corrects a typographical error.
- J. Because the order of characterization is not important, it is acceptable to collect the headspace gas after the waste is repackaged (and the drum age criterion has been met). The stated requirement is intended to address the situation for the QC check on RTR or when a site is not going to do RTR and the waste in that drum will not be mingled with waste from other containers. Doing VE on retrievably stored waste in lieu of RTR will not result in reclassification of the waste as newly generated because the waste is not being repackaged as described in B-3d.
- K. Remove the word “core” because it is in conflict with the rest of the permit. The permit specifically allows other EPA approved methods, samples may be collected using methods other than just coring. Coring will still be used on retrievably stored 55-gal drums, the other EPA test

methods will be used on small volume internal containers.

- L. This change corrects a typographical error.
- M. Section B1-2b(1) states that co-located cores will be collected at a frequency of one per batch. B3-3, under precision requires a co-located core frequency of one per batch or once per week, whichever is more frequent. In accordance with this change sites will collect co-located samples at the frequency specified in B3-3.
- N. This item corrects a typographical error. The permit should correctly read sample container rather than waste container.
- O. In those instances where the tool is not assembled until the time of sampling (size reduction grinders attached to a motor), the blank may be collected from the cleaned parts before they are wrapped for storage. NMED stated that “fully assembled” only includes those portions of the sampling equipment that contacts the sample (does not include motors). The change to Section B1-2b(3) is required to make the sections consistent. That is, the requirement to clean waste surfaces is inconsistent with other requirements in the permit to avoid cross contamination.
- P. The purpose of the gauge is to provide for a “gross leak check” of the sampling system. This function can be served if the gauge is mounted on the manifold for those manifolds that use multiple canisters.
- Q. This item is a correction of a typographical error.
- R. This item is a correction of a typographical error.
- S. This change makes the permit consistent with the change discussed under subitem P of this item.

Discussion:

The items above are Class 1 permit modifications under Section 270.42, Appendix I, A.1 and A.3. These items are most appropriately classified as equipment replacement or upgrading with functionally equivalent component or as administrative and informational changes. They are minor changes to the permit necessary to keep it current with facility operations. The items neither substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

A. Section B1, page 18

Sampling equipment (e.g., bowls, spoons, chisel, VOC sub-sampler) shall also be cleaned. Equipment blanks shall be collected for the sampling equipment at a frequency of one per equipment cleaning batch. After the sampling equipment has been cleaned, one item from the equipment cleaning batch is randomly selected, water (e.g., deionized water, HPLC water) is passed over its surface, collected in a clean container, and analyzed for the analytes listed in Tables B3-4, B3-6, and B3-8 of Permit Attachment B3. The results of the equipment blank will be considered acceptable if the results indicate no analyte present at a concentration greater than three times the MDLs listed in Tables B3-4 and B3-6 and in the PRDLs in B3-8 of Permit Attachment B3. If analytes are detected at concentrations greater than three times the MDLs (or PRDLs for metals), then the associated equipment cleaning batch of sampling equipment shall

be cleaned again and another equipment blank collected. Equipment from an equipment cleaning batch may not be used until analytical results have been received verifying an adequately low level of contamination in the equipment blank. The above equipment blanks may be performed on a purchased batch basis for sampling equipment purchased sterile and sealed in protective packaging. Equipment blanks need not be performed for equipment purchased in sealed protective packaging accompanied by a certificate certifying cleanliness.

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B. Section B1, page B1-2

C Sample canisters, as illustrated in Figure B1-2, are leak-free, ~~welded~~ stainless steel pressure vessels, with a chromium-nickel oxide (Cr-NiO) SUMMA®-passivated interior surface, bellows valve, and a pressure/vacuum gauge. Equivalent designs, such as Silco Steel canisters, may be used so long as the leak proof and inert nature of the canister interior surface is demonstrated and documented. All sample canisters must have VCR® fittings for connection to sampling and analytical equipment. The pressure/vacuum gauge must be mounted on each canister. It must be helium-leak tested to 1.5×10^{-7} standard cubic centimeters per second (cc/s), have all stainless steel construction, and be capable of tolerating temperatures to 125EC. The gauge range shall be capable of operating in the leak test range as well as the sample collection range

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C. Section B1, page B1-36

**TABLE B1-4
SAMPLE HANDLING REQUIREMENTS FOR HOMOGENEOUS
SOLIDS AND SOIL/GRAVEL**

Parameter	Suggested Quantity ^a	Required Preservative	Suggested Container	Maximum Holding Time ^b
VOCs	15 grams	Cool to 4°C	Glass Vial ^c	14 Days Prep/ 40 Days Analyze ^d
SVOCs	50 grams	Cool to 4°C	Glass Jar ^e	14 Days Prep/ 40 Days Analyze ^d
Polychlorinated Biphenyls (PCBs) ^f	50 grams	Cool to 4°C	Glass Jar ^e	14 Days Prep/ 40 Days Analyze ^d
Metals	10 grams	Cool to 4°C	Plastic Jar ^g	180 Days ^h

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^a Quantity may be increased or decreased according to the requirements of the analytical laboratory, as long as the QAOs are met.

^b Holding time begins at sample collection (holding times are consistent with SW-846 requirements).

^c 40-ml VOA vial or other appropriate containers shall have septum cap.

^d 40-day holding time allowable only for methanol extract - 14-day holding time for non-extracted VOCs.

^e Opaque glass container, shall have Teflon® lined cap (example, amber jar).

^f Analysis for PCBs is required only for waste streams in Waste Matrix Code S3220 (organics sludges).

^g Polyethylene or polypropylene preferred, glass jar is allowable.

^h Holding time for mercury analysis is 28 days.

Note: Preservation requirements in the most recent version of SW-846 may be used if appropriate.

D. Section B1, page B1-5

- C The temperature sensor shall have a sufficient measurement range for the ambient temperatures expected at the sampling location. The measurement range of the temperature sensor must be from 30EC to 50EC. The temperature sensor calibration shall be traceable to NIST, or equivalent, standards.

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E. Section B1, page B1-2

Manifold Headspace Gas Sampling

This headspace-gas sampling protocol employs a multiport manifold capable of collecting multiple simultaneous headspace samples for analysis and QC purposes. The manifold can be used to collect samples in SUMMA® or equivalent canisters or as part of an on-line integrated sampling/analysis system. The sampling equipment will be leak checked and cleaned prior to first use and as needed thereafter. The manifold and sample canisters will be evacuated to 0.0039 inches (in.) (0.10 millimeters [mm]) mercury (**Hg**) prior to sample collection. Cleaned and evacuated sample canisters will be attached to the evacuated manifold before the manifold inlet valve is opened. The manifold inlet valve will be attached to a changeable filter connected to either a side port needle sampling head (for penetrating a carbon-composite filter) or a drum punch sampling head (capable of punching through the metal lid of a drum ~~without causing sparks~~).

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F. Section B1, Page B1-6

Sampling Through the Carbon Filter

To sample the drum-headspace gas through the drum's carbon-composite filter, a side-port needle (i.e., a hollow needle sealed at the tip with a small opening on its side close to the tip) shall be pressed through the filter and into the headspace beneath the drum lid. This permits the gas to be drawn into the manifold or directly into the canister(s). To assure that the sample collected is representative, all of the general method requirements, sampling apparatus requirements, and QC requirements described in this section shall be met in addition to the following requirements that are pertinent to drum headspace-gas sampling through the carbon filter:

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G. Section B1, page B1-8

B1-1b Quality Control

For manifold and direct canister sampling systems, field QC samples shall be collected on a per sampling batch basis. A sampling batch is a suite of samples collected consecutively using the same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding QC samples), all of which shall be collected within 14 days of the first sample in the batch. For on-line integrated sampling/analysis systems, QC samples shall be collected and analyzed on a per on-line batch basis. ~~Holding times and container requirements for gas sample containers are provided in Table B1-1.~~ An on-line batch is the number of headspace-gas samples collected and analyzed within a 12-hour period using the same on-line integrated analysis system. Table B1-2 provides a summary of field QC sample collection requirements. Table B1-3 provides a summary of QC sample acceptance criteria.

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H. Section B1, page B1-9

B1-1b(1) Field Blanks

Field blanks shall be collected to evaluate background levels of program-required analytes. Field blanks shall be collected prior to sample collection, and at a frequency of one per sampling batch. The Permittees shall require the site project manager to use the field blank data to assess impacts of ambient contamination, if any, on the sample results. Field blank results determined by gas chromatography/mass spectrometry and gas chromatography/flame ionization detection shall be acceptable if the concentration of each VOC analyte is less than or equal to three times the method detection limit (**MDL**) listed in Table B3-2 in Permit Attachment B3. ~~Equipment~~Field blank results determined by FTIRS shall be acceptable if the concentration of each VOC analyte is less than the program required quantitation limit listed in Table B3-2. A nonconformance report shall be initiated and resolved if the final reported QC sample results do not meet the acceptance criteria.

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I. Section B1, page B1-9

B1-1b(2) Equipment Blanks

Equipment blanks shall be collected to assess cleanliness prior to first use after cleaning of all sampling equipment. On-line blanks will be used to assess equipment cleanliness as well as analytical contamination. After the initial cleanliness check, equipment blanks collected through the manifold shall be collected at a frequency of one per sampling batch for VOC analysis or one per day, whichever is more frequent. If the direct canister method is used, field blanks may be used in lieu of equipment blanks. The Permittees shall require the site project manager to use the equipment blank data to assess impacts of potentially contaminated sampling equipment on the sample results. Equipment blank results determined by gas chromatography/mass spectrometry ~~and~~ or gas chromatography/flame ionization detection shall be acceptable if the concentration of each VOC analyte is less than or equal to three times the MDL listed in Table B3-2 in Permit Attachment B3. Equipment blank results determined by FTIRS shall be acceptable if the concentration of each VOC analyte is less than the program required quantitation limit listed in Table B3-2.

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J. Section B1, page B1-23

B1-3b(3) Visual Examination

As an additional QC check, or in lieu of radiography, the waste container contents shall be verified directly by visual examination of the waste container contents ~~after the completion of the headspace gas sampling~~. Visual examination shall be performed on a statistically determined portion of waste containers to verify the results of radiography. With the exception of items or conditions that could pose a hazard to visual examination personnel, the radiography results shall not be made available until after the visual examination is completed. This verification shall include the Waste Matrix Code and waste material parameter weights. The verification shall be performed through a comparison of radiography and visual examination results. The Waste Matrix Code is determined and waste material parameter weights are estimated to verify that the container is properly included in the appropriate waste stream. The results of the visual examination shall be transmitted to the radiography facility.

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K. Section B1, page B1-13

B1-2a Method Requirements

The methods used to collect samples of transuranic (**TRU**) mixed waste, classified as homogenous solids and soil/gravel from waste containers, shall be such that the samples are representative of the waste from which they were taken. To minimize the quantity of investigation-derived waste, laboratories conducting the analytical work may require no more sample than is required for the analysis, based on the analytical methods. However, a sufficient number of samples shall be collected to adequately represent waste being sampled. For those waste streams defined as Summary Category Groups S3000 or S4000 in Attachment B, debris that may also be present within these wastes need not be sampled.

Samples of retrievably stored waste containers will be collected using appropriate coring equipment or other EPA approved methods to collect a representative sample ~~core~~. Newly generated wastes that are sampled from a process as it is generated may be sampled using EPA approved methods, including scoops and ladles, that are capable of collecting a representative sample. All sampling and core sampling will comply with the QC requirements specified in B1-2b. *

L. Section B1, page B1-15

- C Samples of homogenous solids and soil/gravel for VOC analyses shall be collected prior to extruding the core from the liner. Three sub-samples will be collected from the vertical core to form a single 15-gram composite sample. Smaller sample sizes may be used if method PRQL requirements are met for all analytes. The sampling locations shall be randomly selected within three equal-length subsections of the ~~one~~ core along the long axis of the liner and access to the waste shall be gained by making a perpendicular cut through the liner and the core. The Permittees shall require sites to develop documented procedures to select, and record the selection, of random sampling locations. True random sampling involves the proper use of random numbers for identifying sampling locations. The procedures used to select the random sampling locations will be subject to review as part of annual audits by the Permittees. A sampling device such as the metal coring cylinder described in EPA's SW-846 Manual (1996), or equivalent, shall be immediately used to collect the sample once the core has been exposed to air. Immediately after sample collection, the sample shall be extruded into 40-ml volatile organics analysis (**VOA**) vials (or other containers specified in appropriate SW-846 methods), the top rim of the vial visually inspected and wiped clean of any waste residue, and the vial cap secured. Sample handling requirements are outlined in Table B1-4. Additional guidance for this type of sampling can be found in SW-846 (EPA 1996). *

M. Section B1, page B1-17

B1-2b(1) Co-located Samples

In accordance with the requirement to collect field duplicates required by the Environmental Protection Agency (**EPA**) methods found in SW-846 (EPA 1996), samples shall be collected to determine the combined precision of the coring and sampling procedures. The co-located core methodology is a duplicate sample collection methodology intended to collect samples from a second core placed at approximately the same location within the drum when samples are collected by coring. Newly generated waste may not be amenable to coring in some instances. In this case, a co-located sample may be collected from a sample (e.g. scoop) collected from approximately the same location in the waste stream. A sample from each co-located core or newly generated waste sample collected by other means shall be

collected side by side as close as feasible to one another, handled in the same manner, visually inspected through the transparent liner (if cored), and sampled in the same manner at the same randomly selected sample location(s). If the visual examination detects inconsistencies such as color, texture, or waste type in the waste at the sample location, another sampling location may be randomly selected, or the samples may be invalidated and co-located samples or cores may again be collected. Co-located samples, from either core or other sample type, shall be collected at a frequency of one per sampling batch or once per week, whichever is more frequent. A sampling batch is a suite of homogenous solids and soil/gravel samples collected consecutively using the same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field QC samples), all of which shall be collected within 14 days of the first sample in the batch.

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N. Section B1, page B1-26

C Description of final waste sample container disposition, along with signature of individual removing waste sample container from custody.

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O. Section B1, page B1-17

B1-2b(2) Equipment Blanks

In accordance with SW-846 (EPA 1996), equipment blanks shall be collected from fully assembled (i.e., at least those portions of the sampling equipment that contact the sample) sampling and coring tools prior to first use after cleaning at a frequency of one per equipment cleaning batch. An equipment cleaning batch is the number of sampling equipment items cleaned together at one time using the same cleaning method. The equipment blank shall be collected from the fully assembled sampling or coring tool, in the area where the sampling or coring tools are cleaned, prior to covering with protective wrapping and storage. The equipment blank shall be collected by pouring clean water (e.g., deionized water, HPLC water) down the inside of the assembled sampling or coring tool. The water shall be collected in a clean sample container placed at the leading edge of the sampling or coring tool and analyzed for the analytes listed in Tables B3-4, B3-6, and B3-8 of Permit Attachment B3. The results of the equipment blank will be considered acceptable if the analysis indicates no analyte at a concentration greater than three times the MDLs listed in Tables B3-4 and B3-6 or in the Program Required Detection Limits (**PRDL**) in Table B3-8 of Permit Attachment B3. If analytes are detected at concentrations greater than three times the MDLs (or PRDLs for metals), then the associated equipment cleaning batch of sampling or coring tools shall be cleaned again and another equipment blank collected. Equipment from an equipment cleaning batch may not be used until analytical results have been received verifying an adequately low level of contamination in the equipment blank.

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Section B1, page B1-18

B1-2b(3) Coring Tool and Sampling Equipment Cleaning

Coring tools and sampling equipment shall be cleaned in accordance with the following requirements:

! All surfaces of coring tools and sampling equipment that will come into contact with the waste and the samples shall be clean prior to use. All sampling equipment shall be cleaned in the same manner.

P. Section B1, page B1-3

- C Sample canisters, as illustrated in Figure B1-2, are leak-free, ~~welded~~ stainless steel pressure vessels, with a chromium-nickel oxide (**Cr-NiO**) SUMMA®-passivated interior surface, bellows valve, and a pressure/vacuum gauge. Equivalent designs, such as Silco Steel canisters, may be used so long as the leak proof and inert nature of the canister interior surface is demonstrated and documented. All sample canisters must have VCR® fittings for connection to sampling and analytical equipment. The pressure/vacuum gauge must be mounted on each manifold ~~canister~~. It must be helium-leak tested to 1.5×10^{-7} standard cubic centimeters per second (cc/s), have all stainless steel construction, and be capable of tolerating temperatures to 125EC. The gauge range shall be capable of operating in the leak test range as well as the sample collection range. *

Q. Section B1, page 27

All sample containers should be affixed with signed tamper-proof seals or devices so that it is apparent if the sample integrity has been compromised and that the identity of the seal or device is traceable to the individual who affixed the seal. A seal should also be placed on the outside of the shipping container for the same reason. Sample custody documentation shall be placed inside the sealed or locked shipping container, with the current custodian ~~signing~~ signing to release custody. Transfer of custody is completed when the receiving custodian opens the shipping container and signs the custody documentation. The shipping documentation will serve to track the physical transfer of samples between the two custodians. *

R. Section B1, page 7

B1-1a(3)(ii) Sampling Through the Drum Lid

Sampling through the drum lid ~~shall~~ may be performed as an alternative to sampling through the drum's carbon-composite filter if an airtight seal can be maintained. To sample the drum headspace-gas through the drum lid, the lid shall be breached using an appropriate punch. The punch shall form an airtight seal between the drum lid and the manifold or direct canister. To assure that the sample collected is representative, all of the general method requirements, sampling apparatus requirements, and QC requirements specified in EPA's Compendium Method TO-14 (EPA 1988) as appropriate, shall be met in addition to the following requirements: *

S. Section B1, page B1-12

B1-1d Equipment Calibration and Frequency

The manifold pressure sensor ~~and canister pressure gauges~~ shall be certified prior to initial use, then annually, using NIST traceable, or equivalent, standards. If necessary, the pressure indicated by the pressure sensor(s) shall be temperature compensated. The ambient air temperature sensor, if present, shall be certified prior to initial use, then annually, to NIST traceable, or equivalent, temperature standards. *

Item - 6

Description:

Delete the sentence beginning “An example calculation of . . .” on page 3 of Section B2. See strikeout of final permit below.

Basis:

The QAPP has been retired. The relevant materials not incorporated in the WAP have been moved to the WAC and QAPD.

Discussion:

The item above is a Class 1 permit modification under Section 270.42, Appendix I, A.1. This item is most appropriately classified as an administrative and informational change. It is a minor change to the permit necessary to keep it current with facility operations. The item neither substantially alters the permit conditions or reduces the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Section B2, page 3

Note that in Equation B2-3, the upper confidence limit is dependent on x , the number of miscertifications observed in the sample, as well as on n , the sample size. To obtain the required sample size, the values of x that are likely to be seen shall also need to be considered. Sample size that shall be visually examined shall be determined by setting a desired upper confidence limit value and then manipulating x and n in Equation B2-3. ~~An example calculation of the number of waste containers that shall be visually examined is presented as Appendix A of the Transuranic Waste Characterization Quality Assurance Program Plan (U.S. DOE, 1995).~~

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Item - 7

Description:

- A. Change “CAO Office of Regulatory Compliance Manager” to “Permittee” on page B3-28. See redline/strikeout of the appropriate section of the final permit below.
- B. Remove the term “variance” from the appropriate text of the permit description of nonconformances. See strikeout of final permit below.
- C. Correct typographical error in text reference. See redline/strikeout of final permit below.
- D. Delete bullet beginning “A summary of all process . . .” on page B3-32. See strikeout of final permit below.
- E. On page B3-7, line 15 “e.g.” should be added to the parenthetical statement. See redline of final permit below.
- F. Add footnote a from Table B3-8 to Table B3-9 and correct “PQRL” to read “PRQL”. See redline of final permit below.
- G. Change reference in Section B3-11 from “B-4d” to “B-4a(1).” See redline/strikeout of final permit below.
- H. Modify text in Section B3-8 of the permit relating to laboratory duplicates and matrix spike duplicates by adding the word “or” between “duplicates” and “laboratory” on page B3-17. See redline/strikeout of final permit below.
- I. Change the text for calculation of PRQL based on dry weight to calculation based on wet weight in Section B3-8.
- J. Correct typo in section B3 that mandates a signature release “must be performed before any waste associated with the data reviewed is characterized and managed, stored, or disposed at WIPP.” The words “characterized and” should be removed from the statement.

Basis:

- A. This change makes the language in Attachment B3 consistent. The use of a more general title (i.e., permittee) allows for the potential changing of organizational titles without the need for a permit modification.
- B. This change is necessary to keep the permit current with project practices. As the CAO no longer grants variances in the specified cases the term is inappropriate.
- C. This item provides for the correct reference to DQOs in the text of Section B3-11. No DQOs are being proposed for modification.
- D. This requirement is not necessary under this heading. This summary should be included in the up-front narrative section of the waste stream characterization package and is already required under

section B3-10. This level of information is more appropriate on a waste stream level than on a individual drum basis.

- E. The parenthetical statement is only an example of how the sample may be drawn and not a requirement. This permit change clarifies that the parenthetical is only an example and not a requirement.
- F. Section B3-8 states that QC samples and acceptance criteria are to be found in Table B3-9, but this table has no entry for sample duplicates. Footnote a in Table B3-8 addresses this issue and would clarify any confusion if inserted into table B3-9. Also, the change of PRQLs to PQRLs is a correction of a typographical error.
- G. This item corrects a typographical error.
- H. Section B3-8 states that laboratory duplicates and matrix spike duplicates will need to be collected. Table B3-9 does not define the acceptance criteria for lab duplicates. Section B3-6 and B3-7 allow use of either a lab duplicates or a matrix spike duplicate. Table B3-9 is correct and anticipates that labs will perform matrix spike duplicates. The inconsistency between Sections B3-6, B3-7, Table B3-9 and Section B3-8 therefore needs to be clarified to allow use of either a lab duplicate or a matrix spike duplicate in Section B3-8.
- I. SW-846 requires that sample results be calculated on a wet weight basis. Therefore, the PRQL should be calculated on a wet weight basis.
- J. Waste is not characterized at the WIPP and waste data review cannot be performed prior to waste characterization.

Discussion:

The items above are Class 1 permit modifications under Section 270.42, Appendix I, A.1. These items are most appropriately classified as administrative and informational changes. They are minor changes to the permit necessary to keep it current with facility operations. The items neither substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

A. Section B3, page B3-28

~~The CAO Office of Regulatory Compliance manager~~ Permittee must verify that each data summary report and waste stream characterization summary report is complete and notify the originating site in writing of the acceptance status of the data within two weeks of waste stream characterization summary package receipt. The Permittees will maintain the data as appropriate for use in the regulatory compliance programs.

*

B. Section B3, page B3-34

A nonconformance report shall be prepared for each nonconformance identified. Each nonconformance report shall be initiated by the individual(s) identifying the nonconformance. The nonconformance report shall then be processed by knowledgeable and appropriate personnel. For this purpose, a nonconformance

report including, or referencing as appropriate, results of laboratory analysis, QC tests, audit reports, internal memoranda, or letters shall be prepared. The nonconformance report must provide the following information:

- ! Identification of the individual(s) identifying or originating the nonconformance
- ! Description of the nonconformance
- ! Method(s) or suggestions for correcting the nonconformance (corrective action) ~~or description of the variance granted~~ *
*

C. Section B3, page 30

The statistical procedure presented in Permit Attachment B2 shall be used by participating Site Project Managers to evaluate and report waste characterization data from the analysis of homogenous solids and soil/gravel. The procedure, which calculates UCL_{90} values, shall be used to assess compliance with the DQOs in Section 1.5B-4a(1) as well as with RCRA regulations. The procedure must be applied to all laboratory analytical data for total VOCs, total SVOCs, and total metals. For RCRA regulatory compliance (40 CFR § 261.24), data from the analysis of the appropriate metals and organic compounds shall be expressed as toxicity characteristic leaching procedure (**TCLP**) values or results may also be compared to the TC levels expressed as total values. These total values will be considered the regulatory threshold limit (**RTL**) values for the WAP. RTL values are obtained by calculating the weight/weight concentration (in the solid) of a TC analyte that would give the regulatory weight/volume concentration (in the TCLP extract), assuming 100-percent analyte dissolution. *

D. Section B3, page B3-32

- ! Total VOC, SVOC, and metal analytical results for homogenous solids and soil/gravel (if applicable)
- ~~! A summary of all process knowledge documentation supporting the waste stream characterization (e.g., the acceptable knowledge summary report)~~ *
*

E. Section B3, page B3-7

Completeness

Sampling completeness shall be expressed as the number of valid samples collected as a percent of the total number of samples collected for each waste stream. The completeness can also be expressed as the number of valid samples collected as a percent of the total number of drums for each waste stream. A valid sample is defined as a sample collected in accordance with approved sampling methods and the drum was properly prepared for sampling (e.g. the polyliner was vented to the drum headspace). The Permittees shall require participating sampling facilities to achieve a minimum 90 percent completeness. The amount and type of data that may be lost during the headspace-gas sampling operation cannot be predicted in advance. The Permittees shall require the Site Project Quality Assurance (**QA**) Officer to evaluate the importance of any lost or contaminated headspace-gas samples and take corrective action as appropriate. *

F. Section B3, page B3-52

TABLE B3-9
SUMMARY OF LABORATORY QUALITY CONTROL SAMPLES AND FREQUENCIES FOR METALS ANALYSIS

QC Sample	Minimum Frequency	Acceptance Criteria	Corrective Action ^a
Method performance samples	Seven (7) samples initially and four (4) semiannually	Meet Table B3-8 QAOs	Repeat until acceptable
Laboratory blanks	One (1) per analytical batch	# 3 x IDL (# 5 x IDL for ICP-MS) ^b	Redigest and reanalyze any samples with analyte concentrations which are #10 x blank value and \$ 0.5 x PQR PRQL

*

^a Corrective action per section B3-13 when final reported QC samples do not meet the acceptance criteria. Nonconformances do not apply to matrix related exceedances.

^b Applies only to concentrations greater than the ~~PQR~~QLs listed in Table B3-8.

^c # 30 percent control limits apply when sample and duplicate concentrations are \$ 10 x IDL for ICP-AES and AA techniques, and \$ 100 x IDL for Inductively Coupled Plasma—Mass Spectrometry (ICP-MS) techniques. If less than these limits, the absolute difference between the two values shall be less than or equal to the PRQL.

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IDL = Instrument Detection Limit
PDP = Performance Demonstration Program
PQRQL = Program Required Detection Limit
%R = Percent Recovery
RPD = Relative Percent Difference

*

G. Section B3, page B3-29

B3-11 Reconciliation with Data Quality Objectives

Reconciling the results of waste testing and analysis with the DQOs provides a way to ensure that data will be of adequate quality to support the regulatory compliance programs. Reconciliation with the DQOs will take place at both the project level and the Permittees' level. At the project level, reconciliation will be performed by the Site Project Manager; at the Permittees' level, reconciliation will be performed as described below.

Reconciliation at the Project Level

The Permittees shall require each Site Project Manager to ensure that all data generated and used in decision making meet the DQOs provided in Section B-4da(1) of the text of Permit Attachment B. To do

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so, the Site Project Manager must assess whether data of sufficient type, quality, and quantity have been collected. The Site Project Manager must determine if the variability of the data set is small enough to provide the required confidence in the results. The Site Project Manager must also determine if, based on the desired error rates and confidence levels, a sufficient number of valid data points have been determined (as established by the associated completeness rate for each sampling and analytical process). In addition, the Site Project Manager must document that random sampling of containers was performed for the purposes of waste stream characterization.

H. Section B3, page B3-17

B3-8 Total Metal Analysis

Quality Assurance Objectives

The development of DQOs for the program has resulted in the QAOs listed in Table B3-8. The specified QAOs represent the required quality of data necessary to draw valid conclusions regarding program objectives. WAP-required limits, such as the PRQLs associated with metal analysis, are specified to ensure that the analytical data collected satisfy the requirements of all data users. A summary of Quality Control Samples and the associated acceptance criteria for this analysis is provided in Table B3-9. Key data-quality indicators for laboratory measurements are defined below.

Precision

Precision shall be assessed by analyzing laboratory sample duplicates; or laboratory matrix spike duplicates, replicate analyses of laboratory-control samples, and PDP blind-audit samples. Results from measurements on these samples must be compared to the criteria listed in Table B3-8. These QC measurements will be used to demonstrate acceptable method performance and to trigger corrective action when control limits are exceeded.

*

I. Section B3, page B3-18

Program Required Quantitation Limit

The Permittees shall require participating laboratories to demonstrate the capability of analyte quantitation at or below the PRQLs in units of mg/kg ~~dry~~ wet weight (given in Table B3-8). The PRDLs are set an order of magnitude less than the PRQLs (assuming 100 percent solid sample diluted by a factor of 100 during preparation).

*

J. Section B3, page 24

! One hundred percent of the batch data reports must receive technical supervisory signature release for each testing batch, sampling batch, analytical batch and on-line batch. The technical supervisory signature release must occur as soon as practicably possible after the independent technical review in order to determine and correct negative quality trends in the sampling or analytical process. However at a minimum, the technical supervisory signature release must be performed before any waste associated with the data reviewed is ~~characterized and~~ managed, stored, or disposed at WIPP. This release must ensure the following:

*

Section B3, page 24

- ! The Permittees shall require for each site that one hundred percent of the batch data reports receive QA officer (or designee) signature release. The QA Officer signature release must occur as soon as practicably possible after the technical supervisory signature release in order to determine and correct negative quality trends in the sampling or analytical process. However at a minimum, the QA Officer signature release must be performed before any waste associated with the data reviewed is ~~characterized and~~ managed, stored, or disposed at WIPP. This release must ensure the following: *

Section B3, page 25

- ! One hundred percent of the data summary packages and waste stream characterization summary package reports must receive Site Project QA Officer signature release. The Site Project QA Officer signature release must occur as soon as practicably possible in order to determine and correct negative quality trends in the sampling or analytical process. However at a minimum, the Site Project QA Officer signature release must be performed before any waste associated with the data reviewed is ~~characterized and~~ managed, stored, or disposed at WIPP. This signature release must ensure the following: *

Section B3, page 26

- ! One hundred percent of the data summary packages and waste stream characterization summary package reports must have Site Project Manager signature release. The Site Project Manager signature release must occur as soon as practicably possible after the QA officer signature release in order to determine and correct negative quality trends in the sampling or analytical process. However at a minimum, the Site Project Manager signature release must be performed before any waste associated with the data reviewed is ~~characterized and~~ managed, stored, or disposed at WIPP. This signature release must ensure the following: *

Item - 8

Description:

Correct typographical error in reference to Section B4-3e, 5th bullet. See redline/strikeout of final permit below.

Basis:

This item is a correction of a typographical error.

Discussion:

The item above is a Class 1 permit modification under Section 270.42, Appendix I, A.1. This item is most appropriately classified as administrative and informational change. It is a minor change to the permit necessary to keep it current with facility operations. It does not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

- ! Representativeness - Representativeness expresses the degree to which sample data accurately and precisely represent characteristics of a population. Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting acceptable knowledge information is performed in accordance with the minimum standards established in Section ~~B3-b~~B4-3b. Sites also shall assess and document the limitations of the acceptable knowledge information used to assign hazardous waste codes (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed and limitations of information in identifying hazardous wastes).

*

Item - 9

Description:

Make temperature description in Table B6 consistent with text section B1-1a. See redline/strikeout of final permit below.

Basis:

Section B1-1a of the permit allows HSG sampling at ambient equilibrium temperatures of 19°C or higher. Table B6-1 specifies an upper temperature limit of 29°C but references Section B1-1a as controlling. This change corrects the inconsistency by removing the upper temperature limit in Table B6-1.

Discussion:

The item above is a Class 1 permit modification under Section 270.42, Appendix I, A.1. This item is most appropriately classified as administrative and informational change. It is a minor change to the permit necessary to keep it current with facility operations. It does not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Section B6, page B6-79

The following text was extracted from Table B6-1 of the final permit under the heading “Headspace Gas Sampling General Requirements”, the second row.

Are procedures in place to ensure waste containers and contents are allowed to equilibrate to the temperature of the sampling area (19 18-29 degrees and higher Centigrade) by waiting a minimum of 72 hours prior to sampling and that S3000 and S4000 wastes are sampled a minimum of 225 days after packaging? (Section B1-1a)					
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Item - 10

Description:

- A. On page D-2 line 3 delete the sentence beginning “Inspection results as described . . .” and replace with “Inspection results are properly recorded as described below.” See redline/strikeout of final permit below.
- B. On page D-2 line 32 modify the sentence beginning “The inspection logs include . . .” as shown in the strikeout of the final permit below.

Basis:

- A. These inspections are not documented in logbooks. These inspections are, however, recorded as discussed in the permit.
- B. Provides clarification regarding what data is recorded in the logbooks for inspections.

Discussion:

Items A and B above are Class 1 permit modifications under Section 270.42, Appendix I, A.1. These items are most appropriately classified as administrative and informational changes. They are minor changes to the permit necessary to keep it current with facility operations. Neither of these items substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Section D, page 2

Waste handling equipment and area inspections are typically controlled through established procedures and the results are recorded in logbooks or on data sheets. Operators are trained to consult the logbook to identify the status of any piece of waste handling equipment prior to its use. Once a piece of equipment is identified to be operable, a preoperational inspection is initiated in accordance with the appropriate sheet in Permit Attachment D1. Inspection results are properly recorded as described below ~~as described below~~ ~~are entered in the applicable logbook.~~

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Inspections include identifying malfunctions or deteriorating equipment and structures. Inspection results and data, including deficiencies, discrepancies, or needed repairs are recorded. A negative inspection result does not necessarily lead to a repair. A deficiency, such as low fluid level, may be corrected by the inspector immediately. A discrepancy, such as an increasing trend of a data point, may necessitate additional inspection prior to the next scheduled frequency. The actions taken (corrected, additional inspection, or Action Request (AR) for repair submitted) are recorded on the inspection form, the WIPP automated Maintenance Management tracking program (CHAMPS) work order sheet, or the equipment logbook, whichever is applicable.

Items that are operational with restrictions are tagged with those restrictions. Items that are not operational are tagged and locked to prevent their use. Tagged and locked items are listed on the Tagout/Lockout Index. Once a scheduled repair or replacement is accomplished in accordance with the work authorization

procedures, the tag or lock is removed from the item in accordance with the equipment tagout/lockout procedures. Normally, the individual inspecting the equipment/system is not qualified to make repairs and consequently, prepares an AR if repairs are needed. The AR is tracked by the CHAMPS system through the work control process. When parts are received and work instructions are completed, the work order can be scheduled on the Plan of the Day (**POD**). The POD is held daily to ensure facility configuration can support scheduled work items and to allocate and coordinate the resources necessary to complete the items.

Work orders are released for work by the responsible organization. When repairs are complete the responsible organization tests the equipment to ensure the repairs corrected the problem, then closes out the work order, to return the equipment to an operational status for normal operations to resume. Implementation of these procedures constitutes compliance with 20 NMAC 4.1.500 (incorporating 40 CFR §264.15(c)).

Requirements of 20 NMAC 4.1.500 (incorporating 40 CFR §264.15(d)), are met by the inspections for each item or system included in Table D-1. The results of the inspections are maintained for at least three years. The inspection logs include the date and time of inspection, the name of the inspector, ~~a notation of the observations made, and the date and nature of any repairs or other remedial actions.~~ Major pieces of waste handling equipment use proceduralized inspections as shown in Permit Attachment D1. The status of these pieces of equipment is maintained in an equipment logbook that is separate from the checklist. The logbook contains information regarding the condition of the equipment. Equipment operators are required, by the inspection checklist, to consult the logbook as the first activity in the inspection procedure. This logbook is maintained in the operating record. Equipment that is controlled by a logbook includes the waste handling fork lifts, all waste handling cranes, the adjustable center of gravity lift fixture, the CH transuranic (**TRU**) underground transporter, the conveyance loading car, the trailer

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Item - 11

Description:

Change the wording of “Brudi Lift Attachment” to “Push-Pull Attachment” where appropriate throughout the permit. See redline/strikeout of attached sections of the final permit.

Basis:

Brudi is a company name. Use of the company name would infer that use of a “Push-Pull Attachment” from another manufacturer was prohibited. Any push-pull attachment that is functionally equivalent to the Brudi-brand currently in use is acceptable. A change in equipment for handling waste is not being described in this notice of modification. Equipment changes, such as like-for-like replacements or upgrades (as identified in Appendix I, A.3), would be subject to a separate permit modification item.

Discussion:

The item described above is a Class 1 permit modification under Section 270.42, Appendix I, A.1. The most appropriate classification of this change to the permit would be as an administrative and informational change. It is a minor change to the permit necessary to keep it current with facility operations. This item does not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Included Sections of Final Permit:

Attachment D from the final permit (pertinent sections)
Attachment D1 from the final permit (pertinent sections)
Attachment M2 from the final permit (pertinent sections)

Attachment D from the Final Permit (pertinent sections)

Section D, pages D-2 to D-3.

Requirements of 20 NMAC 4.1.500 (incorporating 40 CFR §264.15(d)), are met by the inspections for each item or system included in Table D-1. The results of the inspections are maintained for at least three years. The inspection logs include the date and time of inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions. Major pieces of waste handling equipment use proceduralized inspections as shown in Permit Attachment D1. The status of these pieces of equipment is maintained in an equipment logbook that is separate from the checklist. The logbook contains information regarding the condition of the equipment. Equipment operators are required, by the inspection checklist, to consult the logbook as the first activity in the inspection procedure. This logbook is maintained in the operating record. Equipment that is controlled by a logbook includes the waste handling fork lifts, all waste handling cranes, the adjustable center of gravity lift fixture, the CH transuranic (**TRU**) underground transporter, the conveyance loading car, the trailer jockey, and the ~~Brud~~ push-pull attachment. In addition to the inspections listed in Table D-1, many pieces of equipment are subject to regular preventive maintenance. This includes more in-depth inspections of mechanical systems, load testing of lifting systems, calibration of measurement equipment and other actions as recommended by the equipment manufacturer or as required by DOE Orders. These preventive maintenance activities along with the inspections in Table D-1 make mechanical failure of waste handling equipment unlikely. The WIPP Safety Analysis Report (DOE, 1995a) contains the results of a systematic analysis of waste handling equipment and the hazards associated with potential mechanical failures. Equipment subject to failures that cannot practically be mitigated is retained for analysis and are the basis for contingency planning. The documents in Permit Attachment D1 are for operational and preventive maintenance, to assure the equipment is maintained.

*

Attachment D1 from the Final Permit (pertinent sections)

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CH TRU Waste Handling

Air-Intake Shaft Hoist
Ambulances and Related Emergency Supplies and Equipment
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 ! Underground Ambulances
Adjustable Center of Gravity Lift Fixture
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Facility Inspections
Central Monitoring System
CH TRU Underground Transporter
Conveyance Loading Car
Exhaust Shaft
Eye Wash and Shower Equipment
Fire Detection and Alarm System
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Fire Hose Inspection Record
Fire Hydrants
Fire Pumps
Fire Sprinkler Systems
Fire Trucks
Fork Lifts Used for Waste Handling
Hazardous Material Response Equipment
Miners First Aid Station
Mine Pager Phones
MSHA Air Quality Monitoring
Perimeter Fence, Gates, and Signs
Personal Protective Equipment
Public Address
Radio Equipment
Rescue Truck
 ! Surface R.T.
 ! Underground R.T.
Salt-Handling Shaft
Self Rescuers
Surface TRU Mixed Waste Handling Area
TDOP Upender
TRU Mixed Waste Decontamination Equipment
Underground Openings, Roofbolts, Travelways
Underground Geomechanical Instrumentation System (GIS)
Underground TRU Mixed Waste Disposal Area
Uninterruptible Power Supply (Central UPS)
Vehicle Siren
Ventilation Exhaust
Waste Handling Cranes
Waste Shaft Hoist
Water Tank Level

Forklifts, page 3



PRECAUTIONS AND LIMITATIONS

- A. Preoperational Checks are required prior to operating forklift on each shift.
- B. When handling TRU mixed waste, only those individuals certified per Waste Handling Certification Card WH-01 or WH-02 are authorized to perform this procedure.
- C. Exceeding the following load carrying capacities of the forklift can cause personal injuries or equipment damage:

- Forks: 15,000 lbs at 24 inch load center

- Brudi Push-Pull: 7,500 lbs at 33 inch load center

- Standard Waste Box (SWB) Fixture: 4,000 lbs at 27 inch load center

- Drum Handler: 4,000 lbs at 60 inch load center

Forklifts, Page 7

If Brudi Push/Pull Fixture is going to be used, perform the following:

*

- A. Verify **NO** obvious cracks, breaks, bends, twists, or wear exist
- B. Verify hydraulic hoses are **NOT** crushed, damaged, or leaking
- C. Fixture is properly secured to forklift

Forklifts, page 8

Fork Position Control operates the following:

- With forks installed, moves forks in and out
- With Brudi Push/Pull Fixture installed, retracts and extends Brudi Clamping Device

*

Brudi (cover page)

~~BRUDI~~Push-Pull Attachment

*

Brudi (pertinent text)

If ~~Brudi~~ Push/Pull Fixture is going to be used, perform the following:

*

- D. Verify **NO** obvious cracks, breaks, bends, twists, or wear exist
- E. Verify hydraulic hoses are **NOT** crushed, damaged, or leaking
- F. Fixture is properly secured to forklift

Attachment M2 from the Final Permit (pertinent sections)

Section List of Figures, page 2

List of Figures

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M2-8	Typical RH and CH Transuranic Mixed Waste Container Disposal Configuration	
M2-9	Underground Ventilation System Airflow	
M2-10	Typical Bulkhead Design and Components	
M2-11	Typical Room Barricade	
M2-12	WIPP Facility Surface and Underground CH Transuranic Mixed Waste Process Flow Diagram	
M2-13	Layout and Instrumentation - As of 1/96	

Section M2-2a(1), page 4

Super sacks will be handled and placed using the slip sheet/~~BRUDI~~push-pull technique used for normal waste handling operations. Hence, no new equipment, procedures, or training are required. Once each row of waste units is in place, a layer of 6 super sacks will be placed on top of them. See Figure M2-5. The super sack will be 5 ft (1.5 m) wide by 6 ft (1.8 m) deep by 1.5 ft (0.45 m) high and will be of multi-wall construction with a vapor/moisture barrier. The super sack will have an integral slip sheet or base attachment so that it can be handled and placed in a manner that is identical to how waste units are emplaced, using a ~~BRUDI~~push-pull-like attachment on a lift truck. *

Section M2-2a(1), page 5

Underground Forklifts

CH TRU mixed waste containers loaded on slipsheets will be removed from the facility pallets using forklifts with a ~~BRUDI~~push-pull attachment (Figure M2-7) attached to the forklift-truck front carriage. *

The ~~BRUDI~~push-pull attachment grips the edge of the slipsheet (on which the waste containers sit) to pull the containers onto the platen. After the forklift moves the waste containers to the emplacement location, the ~~BRUDI~~push-pull attachment pushes the containers into position. The use of the ~~BRUDI~~push-pull attachment prevents direct contact between waste containers and forklift tines. SWBs and TDOPs may also be removed from the facility pallet by using forklifts equipped with special adapters for these containers. These special adapters will prevent direct contact between SWBs or TDOPs and forklift tines. *

Section M2-2b(1), page 12

A forklift in the HWDU near the waste stack will be used to remove the waste containers from the facility pallets and to place them in the waste stack using a BRUD push-pull attachment. The waste will be emplaced room by room in Panels 1 through 3. Each panel will be closed off when filled. If a waste container is damaged during the Disposal Phase, it will be immediately overpacked or repaired. CH TRU waste containers will be continuously vented. The filter vents will allow aspiration, preventing internal pressurization of the container and minimizing the buildup of flammable gas concentrations.

*

Figure M2-7
~~BRUD~~ Attachment to Forklift to Allow Handling of Waste Containers

Item - 12

Description:

- A. Revise the signature block on the following checklists in attachment D1 to provide a space for printed name, signature, and date for the inspector and the reviewer;

Surface Ambulance,
Underground Ambulance,
Seagrave Fire Apparatus,
Emergency One Apparatus,
Brush Truck Fire Apparatus,
Underground Rescue Truck,
Hazardous Material Response Equipment,
Surface Rescue Truck,
SCBA,
Quarterly Sprinkler System Test Report, and
Fire Hydrant Inspections.

The above **revised** checklists are attached in the order listed. The revised checklists include the revisions described in A, B, and C.

- B. Revise Facility Operations Round Sheet for location 456, Pumphouse Building to indicate that the minimum water level in the north DW STG tank is 60%.
- C. Revise appropriate equipment checklists from A above as follows;

Surface Ambulance,
Left front tire & lugs (50-65 psi) 65 psi is max.
Right front tire & lugs (50-65 psi) 65 psi is max.
Right rear outer tire & lugs (65-80 psi) 80 psi is max.
Right rear inner tire & lugs (65-80 psi) 80 psi is max.
Left rear outer tire & lugs (65-80 psi) 80 psi is max.
Left rear inner tire & lugs (65-80 psi) 80 psi is max.

Seagrave Fire Apparatus,
Right front tire (105-120 psi)
Right rear outside tire (95-110 psi)
Right rear inside tire (95-110 psi)
Left front tire (105-120 psi)
Left rear outside tire (95-110 psi)
Left rear inside tire (95-110 psi)

Emergency One Apparatus,
Right front tire (65-80 psi)
Right rear outside tire (55-70 psi)

Right rear inside tire (55-70 psi)
Left front tire (65-80 psi)
Left rear outside tire (55-70 psi)
Left rear inside tire (55-70 psi)

Brush Truck Fire Apparatus,

Right front tire (65-80 psi)
Right rear outside tire (65-80 psi)
Right rear inside tire (65-80 psi)
Left front tire (65-80 psi)
Left rear outside tire (65-80 psi)
Left rear inside tire (65-80 psi)

Underground Rescue Truck

Right front tire (105-120 psi)
Right rear tire (105-120 psi)
Left front tire (105-120 psi)
Left rear tire (105-120 psi)

Basis:

- A. These revisions provide clarification to the user that a signature is required upon completion of the checklist. These revisions also provide a higher level of traceability for the checklists. In addition, these changes will ensure that the checklists more clearly reflect the requirements of 40 CFR 264.15(d).
- B. This revision is necessary for the round sheet to be in agreement with the current text in Section E-1a(4) of the permit and in agreement with Table F-6 of the permit. Both areas indicate that the domestic water supply tank will maintain approximately 100,000 gallons as a reserve for fire suppression. This is a 180,000 gallon tank which would require a 60% fill level to maintain the required reserve.
- C. Revisions to the tire inflation requirements provide an operating range that allows the equipment to operate in a normal manner. Exact psi requirements (without ranges) would not allow operation of the equipment unless tire pressures were maintained at an exact pressure.

Discussion:

The items A, B, and C above are Class 1 permit modifications under Section 270.42, Appendix I, A.1. These items to the permit are most appropriately classified as administrative and informational changes. They are minor changes to the permit necessary to keep it current with facility operations. None of these items substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Attachments: Attachment 1-B - Revised Inspection Checklists

Item - 13

Description:

- A. Change “MSHA Air Quality Monitoring” to “MSHA Air Quality Monitor” on line MSHA Air Quality Monitoring in Table D-1 Inspection Schedules. See redline/strikeout of final permit below.
- B. Delete Emergency Services Technician listed under list 11 in Table D-1 (continued), Inspection Schedule Lists. See strikeout of Table D-1 from final permit below.
- C. Change “Senior Dispatcher” to “Underground Facility Operations” in Table D-1 (continued), Inspection Schedule Lists. See redline/strikeout of final permit below.
- D. Change wording “Brudi” to “Push-Pull Attachment” in Table D-1 Inspection Schedules. See redline/strikeout of final permit below.

Basis:

- A. The NMED requested this inspection to be the inspection of the instrument(s) used in air quality checks instead of the actual air quality checks. This change was made in response to a comment from the NMED. Previous wording could have lead to confusion regarding exactly what was monitored.
- B. This change to the permit properly assigns the responsible organization for inspections of various pieces of equipment listed in Table D-1.
- C. This change to the permit reflects a change in job title only.
- D. Brudi is a company name. Use of the company name would infer that use of a “Push-Pull Attachment” from another manufacturer was prohibited. (Also see item 8)

Discussion:

Item A, B, C, and D above are Class 1 permit modifications under 270.42, Appendix I, A.1. These items to the permit are most appropriately classified as administrative and informational changes. They are minor changes to the permit necessary to keep it current with facility operations. None of these items substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Attachments:

Table D-1 (pertinent section)

Table D-1 (continued)

Attachment Table D-1 (pertinent sections)

TABLE D-1 INSPECTION SCHEDULE					
System/Equipment Name	Responsible Organization	Inspection ^a Frequency and Job Title of Personnel Normally Making Inspection	Deterioration ^b	Leaks/ Spills	Other
Air Intake Shaft Hoist	Underground Operations	Preoperational ^c See Lists 1b and c	Yes	NA	Inspect per Mine Safety and Health Administration (MSHA) requirements
Deleted Rows Here					
Mine Pager Phones (between surface and underground)	Facility Operations	Monthly See List 3	NA	NA	NA
MSHA Air Quality Monitoring	Maintenance/Underground Operations	Daily ^l See Lists 1 and 10	NA	NA	Equipment Functional Check
Deleted Rows Here					
Brady Push-Pull Attachment	Waste Operations	Preoperational See List 8	Yes	NA	NA

*
*

TABLE D-1 (CONTINUED)
INSPECTION SCHEDULE LISTS

List 1: Underground Operations

- a. Mining Technician *
 - Senior Mining Technician *
 - Continuous Mining Specialist *
 - Senior Mining Specialist *
 - Mine OPS Supervisor *
- b. Waste Hoist Operator
 - Waste Hoist Shaft Tender
- c. ~~Senior Dispatcher~~ U/G Facility Operations* - *
- Self Rescuers
- Shaft Technician *
- d. Operations Engineer
 - Supervisor U/G Services*
 - Senior Operations Engineer*

List 2: Industrial Safety

- a. Safety Technician *
 - Senior Safety Technician *
 - Safety Specialist *
 - Safety Engineer *
 - Industrial Hygienist *
- b. Fire Protection Engineering *

List 3: Facility Operations

- Facilities Technician *
- Senior Facilities Technician *
- Facility Operations Specialist *
- Central Monitoring Room Operator *
- Central Monitoring Room Specialist *
- Operations Engineer *
- Senior Operations Engineer *
- Facility Shift Manager
- Operations Technical Coordinator *

List 4: Facility Engineering

- Senior Engineer *

List 5: General

- Equipment Custodian*

List 6: Security

- Security Protective *
- Security Protective Supervisor *

List 8: Waste Operations

- Manager, Waste Operations
- TRU-Waste Handler

List 9: Geotechnical Engineering

- Engineer Technician *
- Associate Engineer *
- Engineer *
- Senior Engineer *
- Principal Engineer*

List 10: Maintenance Operations

- Maintenance Technician *
- Maintenance Specialist *
- Senior Maintenance Specialist *
- Contractor *

List 11: Emergency Management

- * ~~Emergency Services Technician~~
- Qualified Emergency Services Personnel
- Fire Protection Technician

Item - 14

Description:

- A. Delete “and forklifts” on page E-7 line 24. See attached redline/strikeout of final permit below.
- B. Revise language on page E-5 line 16-17. See attached redline of final permit below.

Basis:

- A. This change to the permit reflects proper functional capabilities of waste handling equipment used for unloading. Previous language in the permit could have lead to confusion regarding the impact of loss of site power on waste handling equipment. That is, some equipment operates on self-contained power and not site power, as a result, the loss of site power has no potential to impact proper operation of the forklifts.
- B. This change properly identifies those methods that may be used to fight fires involving TRU mixed waste.

Discussion:

These items are Class 1 permit changes under Section 270.42, Appendix I, A.1. The items are most appropriately classified as administrative and informational changes. They are minor changes to the permit necessary to keep it current with facility operations. They do not modify or substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the current permit is no less stringent than the current permit.

A. Section E-2a, page E-7, line 24.

All unloading equipment is inspected in accordance with the schedule shown in Table D-1. Cranes~~and forklifts~~ that are used in the unloading and handling of TRU mixed waste have been designed and constructed so that they will retain their loads in the event of a loss of power. Cranes in the WHB Unit are also designed to withstand a design basis earthquake without moving off of their rails and without dropping their load. Lowering loads is a priority activity after a disruptive event.

*
*

B. Section E-1a(4), page E-5, line 16-17.

The following buildings are connected to and protected by the wet-pipe sprinkler system: the Pumphouse, the Guard and Security Building, the Support Building, the WHB, the Exhaust Filter Building, the TRUPACT Maintenance Facility, the Engineering Building, the Safety and Emergency Services Building, the Training Building, and several other warehouse and maintenance buildings. The Pumphouse, the Support Building, the WHB, and several other warehouse and maintenance buildings also have fire hose

connections. There is no firefighting water-supply system underground. Instead, the underground is equipped with fire extinguishers of various types and in various locations (including vehicles) and a fire truck with a 125 lb (56.7 kg) chemical extinguisher. The underground fuel station is equipped with an automatic, 1,000-lb (453.5 kg) chemical extinguishing systems. Only ~~firefighting foam~~, dry chemical materials, or water are used to fight fires involving TRU mixed waste.

*
*

Item - 15

Description:

- A. Add “Hazardous Waste Responder (HWR 101/101A)(Annual)” to the Training (Type/Amount) in the job description for First Line Initial Response Team Member on page H1-31. See redline of the final permit below.
- B. Change “Associate” on line 18 of page H1-7 to “Bachelors”. See redline/strikeout of pertinent section of the final permit below.
- C. Replace position description for Fire Protection Technician on p. 35 of section H1 with revised description. See redline/strikeout of final permit below.
- D. Add “At least one year verifiable underground work.” to requisite skills section of Mine Rescue Team Member. See redline of final permit below.

Basis:

- A. Upgrading of qualifications for job description to increase the type/amount of training required for this position and align the requirements in the permit with the job training matrix.
- B. Upgrading of qualifications for job description to align the text in the permit with the job training matrix.
- C. Clarification of job description. Also aligns the job description with the qualification card in the permit.
- D. To be consistent with the training requirements outlined in Attachment H.

Discussion:

The items in A, B, C, and D above are Class 1 permit changes under Section 270.42, Appendix I, B.5.b. These items to the permit are most appropriately classified as other changes to the training plan as they do not “affect the type or decrease the amount of training given to an employee”. While some of the changes do increase the job qualifications, they do not change the type or decrease the amount of training. They are minor changes to the permit necessary to keep it current with facility operations. They do not modify or substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

RCRA Hazardous Waste Management Job Descriptions

Position Title: First Line Initial Response Team member

Duties:

- Cooperate, participate, and comply with provisions of the Supplemental Emergency Response Program Plan (SERP)
- Primary function is to provide medical and hazardous material response to the WIPP underground

Requisite Skills, Experience, and Education:

High School Diploma or equivalent, written approval from employee's manager (Authorization Card FLIRT-01), compliance with health and physical requirements, 1) Initial examination and clearance by the Occupational Medical Director, 2) Examined and cleared annually by the Occupational Medical Director, 3) Additional tests: pulmonary function test, cardiac stress test every five years, drug screen, 4) Encouraged to maintain good medical and physical condition, compliance with requirements of the SERP, current knowledge regarding medical response and hazardous materials response.

Training (Type/Amount):

The following training must be completed and current prior to participation during an emergency response:

- ! General Employee Training (GET 19X)
- ! General Employee Training Refresher (GET 19XA)
- ! Inexperienced miner (SAF 501/502)
- ! Confined Space Training (SAF-515)
- ! Hazardous Waste Worker (HWW-101)
- ! Respiratory Protection (SAF-630 and SAF-631 D)
- ! First Aid and CPR (MED-101)
- ! Radiological Worker II (RAD-201)
- ! Confined Space Rescue (ERT 102/102A) (Annual)
- ! Annual Live Fires Practical (ERT 107) (Annual)
- ! Introduction to Firefighting (ERT 117) (Once)
- ! Eight hours of training quarterly
- ! Hazardous Waste Responder (HWR 101/101A)(Annual)

*

B. Section H1, page H1-7

Requisite Skills, Experience and Education:

~~Associate~~Bachelors degree in engineering, or equivalent.

C. Section H1, page H1-35

RCRA Hazardous Waste Management Job Descriptions

Position Title: Fire Protection Technician

Duties:

- ~~— Provide immediate emergency medical and fire response services, on and off site~~
- ~~— Provide hazardous material release response to contain releases~~

Requisite Skills, Experience, and Education:

- ~~— Vocational or commercial high school graduate, or equivalent, plus additional training in emergency fire and medical response, or equivalent. Two years EMT and fire fighting experience, or equivalent.~~

Training (Type/Amount):

- ~~— ! General Employee Training (GET 19X/19XA) (Annual)~~
- ~~— ! Hazardous Waste Worker (HWW-101/102) (Annual)~~
- ~~— ! Hazardous Waste Responder (HWR-101/101A) (Annual)~~
- ~~— ! Radiological Worker (RAD-201/202) (Annual)~~
- ~~— ! Respiratory Protection (SAF-630/ SAF-631D) (Annual)~~
- ~~— ! Fire Protection Technician Qualification Card (FTP-01) (Annual)~~

RCRA Hazardous Waste Management Job Descriptions

Position Title: Fire Protection Technician

Duties:

- Responds to hazardous waste spills in emergency situations
- S Provides emergency fire-response services
- S Conducts routine inspections and maintains all response equipment on site
- S Serves as incident commander
- S Directs emergency teams to control hazardous situations

Requisite Skills, Experience, and Education:

Vocational or commercial high school graduate, or equivalent, plus additional training in emergency fire and medical response, or equivalent.

Training (Type/Amount):

- ! General Employee Training (GET 19X/19XA)
- ! General Employee Training Refresher (GET 19XA)
- ! Hazardous Waste Worker (HWW-101/102)
- ! Hazardous Waste Responder (HWR-101/101A)
- ! Radiological Worker (RAD-201/202)
- ! Respiratory Protection (SAF-630/ SAF-631D)
- ! Fire Protection Technician Qualification Card (FTP-01)

Note: The trainee may perform duties prior to certification only for those evolutions and/or operations for which training has been completed.

D. Section H1, page H1-30

RCRA Hazardous Waste Management Job Descriptions

Position Title: Mine Rescue Team Member

Duties:

- Cooperate, participate, and comply with provisions of the Supplemental Emergency Response Program Plan (SERP)
- Trained in accordance with 30 CFR to respond to mine emergencies beyond that of the FLIRT
- Responsible for underground reentry and rescue after an underground evacuation

Requisite Skills, Experience and Education:

High School Diploma or equivalent, written approval from employee's manager (Authorization Card MRT-01), compliance with health and physical requirements, 1) Initial examination and clearance by the Occupational Medical Director, 2) Examined and cleared annually by the Occupational Medical Director, 3) Additional tests: pulmonary function test, cardiac stress test every five years, drug screen, 4) Encouraged to maintain good medical and physical condition, Compliance with requirements of the SERP, current knowledge regarding rescue and recovery of personnel involved in mine emergencies according to 30 CFR. At least one year verifiable underground work.

Training (Type/Amount):

- ! General Employee Training (GET 19X)

- ! General Employee Training Refresher (GET 19XA)
- ! First Aid and CPR (MED-101)
- ! Respiratory Protection (SAF-630/SAF-631 D)
- ! Radiological Worker II (RAD-201)
- ! Mine Rescue Team Initial training (EOC-101)
- ! Inexperienced Miner Training (SAF-501/502)
- ! Compressed Gas Cylinder Safety (SAF 619) (Once)

Item - 16

Description:

- A. Delete the “Job Performance Measure” on line 1 of page H2-131 and replace with “Qualification Card”. See redline/strikeout of the pertinent section of the Qualification Card for Quality Assurance Inspector from the final permit below.
- B. Add the attached Emergency Services Technician qualification card addendum to the qualification card for the Emergency Services Technician. See redline/strikeout of final permit below.
- C. Revise language in Section H of the permit to provide a more accurate representation of the personnel training program. See redline of final permit below.
- D. Revise course description for Hazardous Waste Responder (HWR-101) on page H2-18. See strikeout of final permit below.
- E. Revise course description for Confined Space Refresher (SAF-515A) on page H2-30. See strikeout of final permit below.
- F. Revise course description for Radiological Worker I (RAD-101). See strikeout of final permit below.
- G. Revise course description for Inexperienced Miner Training (SAF-501). See redline/strikeout of final permit below.
- H. Revise course description for Conduct of Shift Operations (OPS-115). See redline of final permit below.
- I. Revise course description for Office Warden (SAF 632). See redline of final permit below.

Basis:

- A. This is an editorial change to the permit making this heading consistent with the headings in other Qualification Cards. No change in training requirements are associated with this training change.
- B. Addition of training requirements to a qualification card.
- C. This is an editorial revision to the training program description that provides a more accurate reflection of the actual training program. No changes have been made regarding the type or amount of training given to employees.
- D. This is an editorial revision to the course description that provides a more accurate reflection of the actual course. No changes have been made regarding the type or amount of training given in this course to appropriate employees.

- E. This is an editorial revision to the course description that provides a more accurate reflection of the actual course. This change also removes inconsistencies within the course description. No changes have been made regarding the type or amount of training given in this course to appropriate employees.
- F. This is an editorial revision to the course description that provides a more accurate reflection of the actual course. No changes have been made regarding the type or amount of training given in this course to appropriate employees.
- G. This is an editorial revision to the course description that provides a more accurate reflection of the actual course. This change adds training requirements to the course descriptions. No changes have been made regarding the type or decreasing amount of training given in this course to appropriate employees.
- H. This is an editorial revision to the course description that provides a more accurate reflection of the actual course. No changes have been made regarding the type or amount of training given in this course to appropriate employees.
- I. This is an editorial revision to the course description that provides a more accurate reflection of the actual course. No changes have been made regarding the type or amount of training given in this course to appropriate employees.

Discussion:

The items discussed above are Class 1 permit changes under Section 270.42, Appendix I, B.5.b. These items are most appropriately classified as other changes to the training plan as they do not “affect the type or decrease the amount of training given to an employee”. These changes provide minor clarifications and/or corrections. They are minor changes to the permit necessary to keep it current with facility operations. None of these items substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Included Sections of the Final Permit:

Course Description for HWR-101 Hazardous Waste Responder (pertinent sections)
Course Description for SAF-515A Confined Space/Heated Environment Refresher (pertinent sections)
Course Description for RAD-101 Radiological Worker I (pertinent sections)
Course Description for SAF-501 Inexperienced Miner Training (pertinent sections)
Course Description for OPS-115 Conduct of Shift Operations (pertinent sections)
Course Description for SAF-632 Office Warden (pertinent sections)

A. Section H2, page H2-131

3. ~~Job Performance Measure~~ Qualification Card

*

Perform the following tasks:

- ! Receipt inspection
- ! Conduct an inspection
- ! Hold/witness point inspection
- ! Issuance of a corrective action request
- ! Hold tag issuance
- ! Verification of corrective action
- ! Conduct a corrective action receipt inspection

B. Section H2, page H2-126

QUALIFICATION CARD:

EST-01 Emergency Services Technician

DURATION: 2 Years

PREREQUISITES: The candidate must be current in CPR and possess an EMT-I License.

CLASSROOM TRAINING:

Additional classroom training courses are required prior to completion of this qualification card.

SCOPE: This qualification card must be completed by all candidates prior to standing a watch unsupervised. Qualification is a six month process. The individual may perform duties without direct supervision only for those evolutions and/or operations for which training has been completed.

All signatures must be made by an approved Subject Matter Expert. The signatures indicate that the trainee has demonstrated satisfactory knowledge and performance of the task(s) indicated.

REFERENCES: Emergency Services Technician Qualification Card Guide Book (EST-01G)
WIPP Emergency Management Program (WP 12-9)
Emergency Fire Pump (WP 04-FP2202)
Inspection and Testing of Sprinkler Systems
1. Wet Pipe Fire Sprinkler System Testing (PM000025)
2. NFPA 13, Installation of Sprinkler Systems

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*
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*

QUALIFICATION CARD DESCRIPTION (by category)

1. Knowledge Requirements

Demonstrate basic knowledge of emergency management procedures and protocols such as:

- ! The purpose and types of dry chemicals utilized in large and portable dry chemical systems.
- ! Inspection and testing principles of sprinkler systems, buildings, pull boxes, and fire detection systems.
- ! The general operation and hazards of fixed halon systems.
- ! Principles and procedures for operation of various fire and rescue apparatus.
- ! Selection and use of personal protective equipment.
- ! Selection and use of hazardous material equipment and supplies for control and mitigation.

2. Practical Requirements

Demonstrate competency in the following areas:

- ! Use of fire suppression apparatus and equipment.
- ! Use of rescue apparatus and equipment.
- ! Inspection and testing techniques and completion of corresponding forms.
- ! Operation of ambulance and operation and application of all ambulance equipment and supplies.
- ! Application of all hazardous materials equipment and supplies for control and mitigation.

C.

Attachment H, page H-4

When the qualification card is completed, that particular qualification is recorded. Successful completion of formal classroom training is documented on the individual's qualification card. When requirements are met, both for classroom instruction and on-the-job training, and oral board, if applicable, the qualification card is signed by the ~~department~~ manager certifying that the employee is fully competent to perform all aspects of the associated ~~job position~~ qualification. Qualification cards are included in the training records maintained by the Technical Training Group. Qualification cards are living documents subject to change as the scope and content of training changes to meet new and revised regulatory requirements and modifications in job scope.

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Attachment H, page H-7 to H-8

Managers who have direct responsibility for supervising hazardous waste management personnel receive hazardous waste management training relevant to their positions. This training will include GET-19X and its refresher GET-19XA, which is required for all employees, and the Hazardous Waste Worker Supervisor course HWS-101 and its refresher HWS-101A. In addition, a ~~supervisor~~ manager may also take HWW-101 and its refresher HWW-102 if these courses are determined to be useful for his/her position. These course descriptions are included in Permit Attachment H-2. Managers who do not have direct hazardous waste management supervisory responsibilities receive training sufficient to ensure their awareness of hazardous waste management requirements and procedures; however, they do not perform hazardous waste management duties and their positions are not included in the appendices. As is the case with all WIPP facility employees, all managers receive RCRA overview training in GET 19X.

*

D.

Course Description for HWR-101 Hazardous Waste Responder (pertinent sections)

COURSE: HWR-101 - Hazardous Waste Responder

DURATION: 20 hours

PREREQUISITES: GET-19X
Medical Physical
SAF 630/631- Respiratory Protection
HWW 101 - Hazardous Waste Worker

SCOPE: The instructor will present updated information needed for personnel who respond to hazardous material and/or hazardous waste emergencies at the WIPP site.

TYPE: Classroom and Field Exam

OBJECTIVE: Upon completion of this course, the student will be able to respond to hazardous materials emergencies at the WIPP site

Mastery of the terminal objective will be demonstrated by scoring 80 percent or higher on the post course examination, satisfactory performance on the job performance measure for donning and doffing Personal Protective Equipment, and ~~successfully~~ participate as a team in the final practical

REFRESHER: HWR-101A Annually

COURSE DESCRIPTION ~~(by lesson)~~

- | | | |
|---|---|---|
| 1. Regulatory Requirements
. 1 hour | a. 29 CFR 1910.120 (p)(8)(iii)(A) | * |
| 2. Evaluation of Incident
. 3 hours
A. (Types of Information) | a. Physical data
1. color
2. odor
3. sound
b. Cognitive
c. Technical | * |

E.

Course Description for SAF-515A Confined Space/Heated Environment Refresher (pertinent sections)

COURSE: SAF-515A - Confined Space

DURATION: 4 Hours

PREREQUISITES: SAF-515 - Confined Space Initial Training
SAF-630/631 - Respiratory Protection
Current OPS-08 Qual Card

SCOPE: The instructor will present hazards, personal protective equipment requirements, emergency action, and compliance with regulatory and WIPP procedures involving confined space. The course will also review several confined space fatalities lessons learned.

TYPE: Classroom

OBJECTIVES: Upon completion of this course, the student will be able to describe the WIPP's Confined Space ~~and Heated Environment Program~~

*

Mastery of the terminal objective will be demonstrated by scoring 80 percent or higher on the course examination

REFRESHER: Annually

F.

Course Description for RAD-101 Radiological Worker I (pertinent sections)

COURSE: RAD-101 - Radiological Worker I

DURATION: . 16 hours

PREREQUISITES: Written permission of the Radiological Control Manager

SCOPE: The instructor will present radiological theory and practical information necessary to allow unescorted entry into a controlled area, radioactive materials area, radiological buffer area, and radiation area as required by the WIPP Radiation Safety Manual.

TYPE: Classroom And Practical

OBJECTIVES: Upon completion of this course, the student will have the knowledge to work safely in areas controlled for radiological purposes.

Mastery of the terminal objective will be demonstrated by scoring 80 percent or higher on the course examination and satisfactory performance on the practical examination.

Completion of the course meets the training requirements necessary for Radiological Worker -I (RWT-I).

REFRESHER: Retraining every two years with an alternate year refresher.

COURSE DESCRIPTION (by lesson)

1. Radiological Fundamentals

. 2 hours

- a. Introduction
1. DOE Safety Policy
2. Course Overview
3. Radiological Worker (core academics)

.....
f. Summary

~~g. Evaluation~~

*

5. Personnel Monitoring Programs

. 1 hour

- a. External Dosimetry
 1. Thermoluminescent dosimeters
 2. Direct reading dosimeters
 3. Alarming dosimeters
 4. Worker responsibility for external dosimetry
- b. External Monitoring
- c. Worker Dose Records
- d. Summary
- ~~e. Evaluation~~

*

G.

Course Description for SAF-501 Inexperienced Miner Training (pertinent sections)

COURSE: SAF-501 - Inexperienced Miner Training

DURATION: 40 Hours

PREREQUISITES: None (Steel-toe shoes/boots required for underground tour)

SCOPE: The instructor will present the required information to allow unescorted underground access

OBJECTIVES: Fulfill all requirements of 30 CFR part 48 for underground access.

Mastery of the terminal objective will be demonstrated by satisfactory performance on all practical sessions and by scoring 80 percent or higher on the daily exams with no score less than 70 percent with post course examination.

REFRESHER: SAF-502 Annually

COURSE DESCRIPTION (by lesson)

-
- | | | | |
|-------------------------------------|----|---------------------------------------|---|
| 5. Self-Rescuer/Respiratory Devices | a. | Purpose | * |
| . 1.5 hour | | b. Service life | * |
| | | c. Inspection/Color code | |
| | | d. Mine operator quarterly inspection | |
| | | e. The self-rescuer | |
| | | 1. Features | |
| | | 2. The assembly | |
| | | f. Operation | |
| | | g. Demonstration | |
| | | h. Practical application | |
| | | i. Respiratory protection | |
| | | 1. The WIPP program | |
| | | 2. Requirements | |
| | | j. Summary | |
-

- | | | |
|-------------------|----|-----------------------------|
| 7. Transportation | a. | General |
| . 1 hour | 1. | Surface |
| | 2. | Underground |
| | b. | Hazards |
| | c. | Hazard preventive equipment |

1. Lighting
2. Alarms
- d. Personnel warning systems
- e. Interaction with pedestrians
 1. Normal travel patterns
 2. Variations
- f. Samples of hazards
 1. Conveyance
 2. Electric carts
 3. Haulage trucks
 4. Fork lift trucks
- g. Summary/exam

*

11.Evacuation and Escape Routes a.
. 2 hour

WIPP underground evacuation
procedures

1. Authorization for evacuation
2. Notifications
3. Initial actions
- b. Escapes
 1. Purpose
 2. Primary
 3. Secondary
- c. Non-routine egress
 1. Combination usage
 2. Blocked access
- ~~d. Summary~~
- d. Define a barricade
- e. Function of barricades
- f. Permanent barricade
- g. Temporary barricades
- h. Methods of erecting a temporary barricade
- i. Barricades in relationship with WIPP design
- j. Summary

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H.

Course Description for OPS-115 Conduct of Shift Operations (pertinent sections)

COURSE: OPS-115 - Conduct of Shift Operations

DURATION: . 8 hours

PREREQUISITES: None

SCOPE: The instructor will describe how shift operation will be conducted at the site.

OBJECTIVES: Upon completion of this course, the student will be able to perform their job in accordance with Operations Department “Conduct of Operations” WP 04-CO.

Mastery of the terminal objective will be demonstrated by scoring 80 percent or higher on the course examination.

REFRESHER: NONE

COURSE DESCRIPTION (by lesson)

1. DOE Guidance for Conduct of Operations and Basic Requirements . 1 hour
 - a. DOE Policy
 - b. DOE Orders
 - c. Conduct of operations sections
 1. Operations organization and administration
 2. Shift routines and operating practices
 3. Control area activities for the WIPP
 4. Communications
 5. Control of on-shift training
 6. Investigation of abnormal events
 7. Notifications
 8. Control of equipment and system status
 9. Tagouts and lockouts
 10. Independent verification
 11. Logkeeping
 12. Operations turnover
 13. Operations aspects of facility unique processes
 14. Required reading
 15. Timely orders to operators *
 16. Operations procedures *
 17. Operator aid posting *
 18. Equipment and piping labeling

I.

Attachment - Course Description for SAF-632 Office Warden (pertinent sections)

COURSE: SAF 632 - Office Warden

DURATION: . 2 Hours

PREREQUISITES: None

SCOPE:

TYPE: Classroom

OBJECTIVES: Upon completion of this course, the student will be able to state the responsibilities and duties of the Office Warden, in accordance with established guidelines, policies, and regulations.

REFRESHER: SAF-632 annually

- | | | |
|---------------------------------|---|---|
| 1. Objectives
. 10 minutes | a. Define role of Office Warden
b. List responsibilities
c. Describe emergency notification system
d. Describe purpose of assembly/staging areas | * |
| 2. Presentation
. 90 minutes | a. Role of Office Warden
b. Office Warden responsibilities
1. Day-to-day
2. Emergency situations
3. Bomb threats
4. Inclement weather
5. Personnel accountability w/no assembly
c. Emergency Notification System
1. Different evacuation notifications
2. Reporting emergencies
d. Assembly/staging areas
1. Purpose
2. Locations | * |

Item - 17

Description:

Add a new position for sampling team called “Sampling Team Assistant”. See redline/strikeout of pertinent sections of final permit below.

- S Add Sampling Team Assistant (STA-01) to table of contents for Attachment H1.
- S Add Sampling Team Assistant (STA-01) job description to Attachment H1.
- S Add Sampling Team Assistant (STA-01) to table of contents for Attachment H2.
- S Add Sampling Team Assistant (STA-01) qualification card to permit attachment H2
- S Add Sampling Team Assistant to table of RCRA Hazardous Management Job Titles on page 1 of Attachment H1.

Basis:

To provide for adequate support in non-emergency response. These additions do not impact permitted activities, they enhance daily operations.

Discussion:

The item described above is a Class 1 permit modifications under Section 270.42, Appendix I, B.5.b. This item to the permit is most appropriately classified as other changes to the training plan as it does not “affect the type or decrease the amount of training given to an employee”. The change is a minor change to the permit necessary to keep it current with facility operations. It does not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Included Sections of Final Permit:

Permit Attachment H1 Table of Contents
Table of RCRA Hazardous Management Job Titles
Sampling Team Assistant - Job Description
Permit Attachment H2 Table of Contents
Sampling Team Assistant (STA-01) - Qualification Card

Attachment Permit Attachment H1 Table of Contents

ATTACHMENT H1

RCRA HAZARDOUS WASTE MANAGEMENT JOB TITLES AND DESCRIPTIONS

TABLE OF CONTENTS

Job Titles	H1-1
Job Descriptions	H1-3
Hazardous Waste Worker	H1-3
TRU Waste Handlers	H1-4
Underground Hazardous Waste Worker	H1-5
Waste Operations Administrative Assistant	H1-7
WWIS Data Administrator	H1-8
Manager, Waste Operations	H1-9
Radiological Control Technician	H1-10
Manager, Radiation Control	H1-12
Technical Trainer	H1-13
Manager, Technical Training	H1-14
Emergency Services Technician	H1-15
Quality Assurance Technician	H1-16
Team Leader, Inspection Services	H1-17
Facility Inspection, Repair, and Service Team (FIRST) Leader	H1-18
Facility Inspection, Repair, and Service Team (FIRST)	H1-19
Sampling Team Member	H1-20
Sampling Team Assistant.....	H1- * H1-21
Manager, Environmental Compliance & Support	H1-21
Facility Shift Engineer	H1-22
Facility Shift Manager	H1-23
Central Monitoring Room Operator	H1-24
Waste Hoist Operator	H1-25
Waste Hoist Shaft Tender	H1-26
Waste Hoisting Manager	H1-27
Chief Office Warden	H1-28
Assistant Chief Office Warden	H1-29
Mine Rescue Team Member	H1-30
First Line Initial Response Team member	H1-31
Emergency Response Team	H1-32
Fire Brigade	H1-33
Fire Protection Technician	H1-34

Attachment Table of RCRA Hazardous Management Job Titles

ATTACHMENT H1

RCRA HAZARDOUS WASTE MANAGEMENT JOB TITLES AND DESCRIPTIONS

RCRA Hazardous Management Job Titles	
Hazardous Waste Worker	
TRU Waste Handlers	
Underground Hazardous Waste Worker	
Non-TRU Waste Handlers	
Waste Operations Administrative Assistant	
WWIS Data Administrator	
Manager, Waste Operations	
Radiological Control Technician	
Manager, Radiation Control	
Technical Trainer	
Manager, Technical Training	
Emergency Services Technician	
Quality Assurance Technician	
Team Leader, Inspection Services	
Facility Inspection, Repair, and Service Team (FIRST) Leader	
Facility Inspection, Repair, and Service Team (FIRST)	
Sampling Team Member	
Sampling Team Assistant	
Manager, Environmental Compliance and Support	
Facility Shift Engineer	
Facility Shift Manager	
Central Monitoring Room Operator	
Waste Hoist Operator	
Waste Hoist Shaft Tender	
Waste Hoisting Manager	
Chief Office Warden	
Assistant Chief Office Warden	
Mine Rescue Team Member	
First Line Initial Response Team member	
Emergency Response Team	
Fire Brigade	
Fire Protection Technician	

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Attachment Sampling Team Assistant - Job Description

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RCRA Hazardous Waste Management Job Descriptions

Position Title: Sampling Team Assistant

Duties:

- Assists sampling team members in the collection of waste samples for characterization and environmental media for determination of possible releases. Sampling Team Assistant will not respond to hazardous material spills.

Requisite Skills, Experience and Education:

Academic or vocational high school graduate, or equivalent, with courses in algebra and chemistry or biology, plus Associate degree in engineering or science with courses in computer science, or equivalent.

Training (Type/Amount):

- ! General Employee Training (GET 19X)
- ! General Employee Training Refresher (GET 19XA)
- ! Hazardous Waste Worker (HWW-101/102)
- ! Sampling Team Assistant Qualification (STA-01)
- ! Respiratory Protection (SAF 630/631) (Annual)

Attachment Permit Attachment H2 Table of Contents

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ATTACHMENT H2

TRAINING COURSE AND QUALIFICATION CARD OUTLINES

TABLE OF CONTENTS

Course Outlines	H2-1
GET19X - General Employee Training	H2-3
GET19XA - General Employee Training Refresher	H2-8
HWW-101 - Hazardous Waste Worker	H2-11
HWW-102 - Hazardous Waste Worker Refresher	H2-15
HWR-101 - Hazardous Waste Responder	H2-18
HWR-101A - Hazardous Waste Responder, Refresher	H2-22
HWS-101 - Hazardous Waste Worker Supervisor	H2-23
HWS-101A - Hazardous Waste Worker Supervisor-Refresher	H2-25
SAF-630/631 - Respiratory Protection	H2-26
SAF-515 - Confined Space	H2-29
SAF-515A - Confined Space	H2-30
RAD-101 - Radiological Worker I	H2-31
RAD-201 - Radiological Worker II	H2-40
TRG-293/298 - Subject Matter Expert and On-the-Job Training	H2-43
TRG-300 - Classroom Instructor - Level II	H2-45
MED-101 - First Aid and CPR	H2-56
MED-101A - First Aid and CPR Refresher	H2-59
HMT-102 - Hazardous Materials and Waste Transportation	H2-60
HMT-104 - DOT Emergency Response Information	H2-68
SAF-501 - Inexperienced Miner Training	H2-70
SAF-502 - Mine Safety-Experienced Miner Refresher	H2-80
RIG-001 - Incidental Rigger	H2-84
OPS-115 - Conduct of Shift Operations	H2-86
TRG-296 - Root Cause Analysis	H2-90
SAF-645 - RCRA Emergency Coordinator (WIPP Contingency Plan Procedure)	H2-92
SAF 632 - Office Warden	H2-95
SAF-621 - Firefighter I	H2-97
EOC-101 - Initial Mine Rescue	H2-104
Radiological Control Technician Fundamental Academic Lessons	H2-106
Radiological Control Technician Site-Specific Academic Lessons	H2-112
Qualification Cards	H2-121
CH Waste Handling Technician (WH-01A, WH-01B, WH-01C)	H2-123
CH Waste Handling Engineer (WH-02)	H2-123
Radiological Control Technician (RCT)	H2-125
EST-01 Emergency Services Technician	H2-126

1	FPT-01 Fire Protection Technician	H2-128	
2	Quality Assurance Inspector	H2-130	
3	Facility Operations Roving Watch	H2-132	
4	Central Monitoring Room Operator	H2-134	
5	Facility Operations Shift Supervisor	H2-136	
6	WWIS Data Administrator	H2-138	
7	Federal Motor Carrier Safety Regulations (TE-02)	H2-140	
8	Hazardous Materials (TE-03)	H2-140	
9	Hazardous Waste Shipments by Public Highway (TE-05)	H2-140	
10	Sampling Team (ST-01)	H2-141	
11	Sampling Team Assistant (STA-01).....	H2-	*
12	Equipment Tagout/Lockout Procedure, Authorizing Supervisor (OPS-01)	H2-143	
13	Equipment Tagout/Lockout Procedure, Operations Technician (OPS-01T)	H2-145	
14	Waste Handling Hoist Equipment Operator	H2-147	
15	Waste Handling Shaft Tender Operator	H2-149	*

QUALIFICATION CARD:	Sampling Team Assistant (ST-01)	*
		*
DURATION:	1 month	*
		*
PREREQUISITES:	HWW-101 - Hazardous Waste Worker/Hazardous Waste Responder	*
		*
SCOPE:	This qualification card must be completed by all candidates prior to performing sampling tasks without the direct supervision of a qualified person. This qualification ensures that the sampler will collect samples in a way that will protect the sampler and the integrity of the sample collected.	*
		*
		*
		*
REFERENCES:	WIPP Sampling Team Qualification Guide ST-01G	*
	WP 02-EC.05 Quality Assurance Project Plan for WIPP Site	*
	Effluent and Hazardous Materials Sampling	*
	WP 02-EC.06 WIPP Site Effluent and Hazardous Materials	*
	Sampling Plan	*
		*
		*
QUALIFICATION CARD DESCRIPTION (by category)		*
		*
1. Knowledge Requirements		*
		*
	Demonstrate basic knowledge of hazardous waste sampling protocol such as:	*
		*
	! Preventing cross-contamination of samples and equipment	*
	! Importance of the a chain-of-custody	*
	! Purpose of the field logbook and documentation	*
	! Labeling and sealing procedures	*
	! Methods of obtaining various sample types (i.e. TCLP organics, volatile organic compounds, TCLP metals)	*
		*
2. Safety Requirements		*
		*
	Demonstrate knowledge of the safety requirements for sampling activities such as:	*
		*
	! Level of personal protective equipment (PPE) needed for various sampling situations	*
	! Actions to take when encountering damaged or bulging containers	*
	! Importance of the “Buddy System”	*
		*
3. Practical Requirements		*
		*
	! Correct and safe use of sampling equipment	*
	! Collection of a given sample preventing cross-contamination	*
	! Labeling and sealing sampling containers	*
	! Completion of the Chain-of-Custody form	*

Item - 18

Description:

Delete reference to “nylon” from description of sampling line. See redline/strikeout of final permit below.

Basis:

The industry standard, which is teflon, is currently used at the site. This change to the permit wording makes the permit consistent with the site practices.

Discussion:

This item is a Class 1 permit modification under Section 270.42, Appendix I, A.3. It is most appropriately classified as an “[e]quipment replacement or upgrading with functionally equivalent components (e.g., pipes, valves, pumps, conveyors, controls).” The change constitutes a minor change to the permit necessary to keep it current with facility operations. It does not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment.

Section L, page 20

The DMP wells will be cased and screened through the production interval with materials that do not yield contamination to the aquifer or allow the production interval to collapse under stress (high epoxy fiberglass). Details of well construction are presented in Section L-3b(1). An electric, submersible pump installation without the use of a packer will be used in this instance. The largest amount of discharge from the submersible pump will take place from a discharge pipe. In addition to this main discharge pipe a dedicated ~~nylon~~ sample line, running parallel to the discharge pipe, will also be used. Flow through the pipe will be regulated on the surface by a flow control valve and/or variable speed drive controller. Cumulative flow will be measured using a totalizing flow meter. Flow from the discharge pipe will be routed to a discharge tank for disposal.

*

Section L, page 20

The dedicated ~~nylon~~ sampling line will be used to collect the water sample that will undergo analysis. By using a dedicated ~~nylon~~ sample line, the water will not be contaminated by the metal discharge pipe. The sample line will branch from the main discharge pipe a few inches above the pump. Flow from the sample line will be routed into the sample collection area. Flow through the sample collection line will be regulated by a flow-control valve. The sample line will be insulated at the surface to minimize temperature fluctuations.

*

1 Section L, page 22

2
3 The three field indicator parameters of temperature, Eh, and pH will be determined by either an "in-line"
4 technique, using a self-contained flow cell, or an "off-line" technique, in which the samples will be
5 collected from a ~~nylon~~ sample line at atmospheric pressure. The iron, divalent cation, chloride, alkalinity, *
6 specific conductance, and specific gravity samples will be collected from the ~~nylon~~ sample line at
7 atmospheric pressure. Because of the lack of sophisticated weights and measures equipment available for
8 field density assessments, field density evaluations will be expressed in terms of specific gravity, which is
9 a unitless measure. Density is expressed as unit weight per unit volume.

10
11 Section L, page 22

12
13 New polyethylene containers will be used to collect the serial samples from the ~~nylon~~ sample line. Serial *
14 sampling water collected for solute and specific conductance determinations will be filtered through a 0.45
15 micrometers (µm) membrane filter using a stainless-steel, in-line filter holder. Filtered water will be used
16 to rinse the sample bottle prior to serial sample collection. Unfiltered ground water will be used when
17 determining temperature, pH, Eh, and specific gravity. Sample bottles will be properly identified and
18 labeled.

19
20 Section L, page 24

21
22 Water samples will be collected at atmospheric pressure using either the filtered or unfiltered ~~nylon~~ *
23 sampling lines branching from the main sample line. Detailed protocols, in the form of procedures, assure
24 that final samples will be collected in a consistent and repeatable fashion. WIPP Procedure WP 02-
25 EM1006 defines the requirements for collection of final samples for analyses (Permit Attachment P).

Item - 19

Description:

Delete the phrase “to be maintained” from Section M2-2b, page M2-13, line 13. See strikeout of final permit below.

Basis:

The text of Section M2-2b page M2-13, line 13, states “space is required to be maintained over the stacks of containers to assure adequate ventilation for waste handling operations” On line 21 the text states “No roof maintenance behind stacks of waste is planned.” The first quote implies the need for active roof maintenance to address ventilation needs in rooms with waste emplaced. The second states that no such maintenance is planned. As this inconsistency may lead to confusion during enforcement inspections, the phrase “to be maintained” should be deleted to eliminate this inconsistency.

Discussion:

The item above is a Class 1 permit modification under Section 270.42, Appendix I, A.1. This item is most appropriately classified as an administrative and informational change. It is a minor change to the permit necessary to keep it current with facility operations. The item neither substantially alters the permit conditions or reduces the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit.

Section M2-2b, page M2-13.

Because the emplacement of CH TRU mixed waste into the HWDUs will typically be in the order received and unloaded from the TRUPACT-IIs, 7-packs of drums, SWBs, TDOPs, and 85-gal (321-L) overpack containers will be emplaced as they arrive (except that 85-gal (321-L) overpacks will only be placed on the top row in the repository). There is no specification for the amount of space to be maintained between the waste containers themselves, or between the waste containers and the walls. Containers will be stacked in the best manner to provide stability for the stack (which is up to three containers high) and to make best use of available space. It is anticipated that the space between the wall and the container could be from 8 to 18 in. (20 to 46 cm). This space is a function of disposal room wall irregularities, container type, and sequence of emplacement. Bags of backfill will occupy some of this space. Space is required to ~~be maintained~~ over the stacks of containers to assure adequate ventilation for waste handling operations. A minimum of 16 in. (41 cm) was specified in the Final Design Validation Report (Appendix D1, Chapter 12 of the WIPP RCRA Part B Permit Application (DOE, 1997)) to maintain air flow. Typically, the space above a stack of containers will be 36 to 48 in. (90 to 122 cm). However 18 in. (0.45 m) will contain backfill material consisting of bags of Magnesium Oxide (MgO). Figure M2-8 shows a typical container configuration, although this figure does not mix containers on any row. Such mixing, while inefficient, will be allowed to assure timely movement of waste into the underground. No aisle space will be maintained for personnel access to emplaced waste containers. No roof maintenance behind stacks of

*

1 waste is planned.

Item - 20

Description:

Revise references in Attachment P as well as actual procedures. See redline/strikeout of final permit below.

Basis:

This change will make references in Attachment P of the final permit consistent with existing procedures. Also, to provide procedures that have been updated to reflect current operating requirements. In particular, these procedures have been updated to reflect revisions in the Carlsbad Area Office (CAO) Quality Assurance Program Description (QAPD).

Discussion:

This item is a Class 1 permit modification under Section 270.42, Appendix I, A.1. It is most appropriately classified as an administrative and informational change. The item constitutes a minor change to the permit necessary to keep it current with facility operations. It does not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment and the modified permit is no less stringent than the current permit. Section 4 of the QAPD has not been modified.

Attachments: (Note: In the attached redline/strikeout versions of the referenced procedures a double-underline denotes redline text.)

Attachment 1-C - WID Quality Assurance Program Description

Attachment 1-D - WP 10-AD3029

ATTACHMENT P

WIPP TECHNICAL PROCEDURES REFERENCED IN OTHER ATTACHMENTS

TABLE OF CONTENTS

WP 02-EM1002	Electric Submersible Pump Monitoring System Installation and Operation (Revision 0)
WP 02-EM1005	Groundwater Serial Sample Analysis (Revision 1)

1	WP 02-EM1006	Final Sample and Serial Sample Collection (Revision 1)	
2			
3	WP 02-EM1014	Groundwater Level Measurement (Revision 0)	
4			
5	WP 02-EM1015	Water Quality Monitoring Using the YSI Model 3560 Monitoring System (Revision 0)	
6			
7			
8	WP 02-EM3001	Administrative Processes for Environmental Monitoring Programs (Revision 1)	
9			
10	WP 02-EM3003	Non-radiological Data Validation and Verification (Revision 0)	
11			
12	WP 02-RC.01	Site Generated, Non-Radioactive Hazardous Waste Management Plan (Revision 0, Change 4)	
13			
14			
15	WP 02-RC.04	RCRA Training Documentation (Revision 0, Change 1)	
16			
17	WP 10-AD3029	Calibration and Control of Monitoring and Data Collection Equipment (Revision 0, Change 1)	*
18			*
19			
20	WP 12-HP1100	Radiological Surveys (Revision 2)	
21			
22	WP 13-1	WID Quality Assurance Program Description (QAPD) (Revision 1716, Change 6)	*

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Attachment 1-A - Revised Part A

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Attachment 1-B - Revised Inspection Checklists

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Attachment 1-C - WP 10-AD3029

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Attachment 1-D - WID Quality Assurance Program Description (pertinent sections)